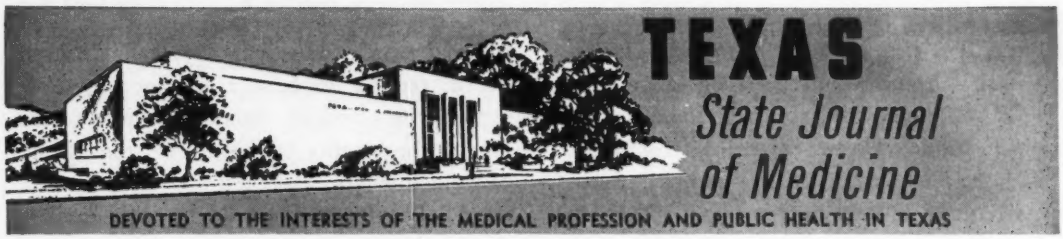

VOLUME 53 • NUMBER 10 • OCTOBER, 1957

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Subscriptions: $3 per year for members; $6 for nonmembers; $7 for foreign. Single copy: 75 cents.

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Making Voluntary Insurance Work

During my life as a physician the economic aspect of medical care has undergone tremendous changes. These have been in part due to the transition from a period of depression to a period of inflation; during this same time the discovery of new drugs and the development of new techniques in medicine and surgery have increased the number of available medical services. These and other factors have increased the cost of illness; this in turn has added emphasis to the drive by various groups within this country for socialized medicine. The three weapons which have been of the greatest value in our stand against socialization have been improved medical care, better public relations, and voluntary prepaid health insurance.

At present, voluntary health insurance has brought protection to more than 110,000,000 people in these United States. In the course of the development of this type of insurance, the policyholders have demanded more and more extensive coverage; and such coverage, plus the increased utilization of hospitalization, has increased the cost of the premiums. This basic type of coverage has reached a plateau in that the premiums cannot go much higher without reaching a point where the average man cannot afford to carry such insurance.

At the same time, there has been a demand for a type of coverage which would meet the expense of a serious, long term, major illness. This was first answered by the so-called catastrophic illness policy, which included several of the dreaded diseases, and some companies are now offering policies which cover the expense of any illness that

requires great expense. Such coverage usually goes under the name of "Major Medical Expense." The first policy of this type was written in 1949, and at present there are nearly 10,000,000 Americans who have some type of major medical coverage. Several different types of policies have been tried in this field, probably the most successful being the deductible type with the patient paying a percentage of the amount over the basic deduction; it appears that in the future this will become increasingly popular. This type of insurance can be of great value to the medical profession. It assures the physician of his fee in those prolonged and serious cases that require an excessive amount of his time; also, it is another weapon in the fight against socialized medicine, and it will save the average family from becoming bankrupt when such major illness strikes.

As this type of coverage has become more popular, insurance carriers have complained that some physicians have taken advantage of the fact by raising their fees when the patient is so covered. This practice will necessitate an increase in the premium charged for such a policy and ultimately will result in failure of this program. Insurance companies are hesitant to complain about such violations through the channels of organized medicine. Occasionally, a capable claim adjuster can reach a satisfactory revision in the fee by personal interview with the physician, and only rarely are such cases appealed to the grievance committee of the county society. Although the company may believe that an overcharge has been made, the fee is usually paid unless it is exorbitant. What may seem at first to be a high fee frequently is found to be a justified charge when the adjustor learns the exact circumstances of the case. Most insurance report blanks are inadequate; and, if the physician will send with the bill a narrative report which justifies the fee, the need for delay and investigation may be eliminated.

If this type of insurance is to survive, physicians must charge their usual fee; and, if free enterprise in the practice of medicine is to survive, the amount of this fee must be determined by each individual physician. In arriving at the fee to be charged for any given service, the physician should take into consideration the severity of the disease, the amount of work involved, and the responsibility undertaken. The fee also should be influenced by the usual and customary charge for such medical service in a given area and by the individual patient's ability to pay. Finally, before presenting the bill, each physician could well ask himself, "Have I earned it?"

—R. M. TENERY, Waxahachie.

PR: Personal Responsibility

The Medical Society of New Jersey has been emphasizing a slogan recently which basically says, "Public Relations Means Personal Responsibility." This same point of view was stressed over and over in the Public Relations Conference sponsored by the Texas Medical Association last month.

Regardless of what the medical profession as an organized entity does to try to create good will, it is all as "a sounding brass or a tinkling cymbal," Leo E. Brown, American Medical Association public relations director, pointed out, if the individual physician fails to practice good relations in the handling of each patient.

Furthermore, as Dan J. Forrestal, manager of public relations for the Monsanto Chemical Company underscored, the impression an individual (or association) makes on the public will be favorable only insofar as the inherent value or conduct of that individual is worth while and the message about this worthiness is told appropriately. For, he said, *PR* (public relations) always equals x (inherent value) plus y (interpretation of that value).

Each doctor is aware of many of the little things about himself and his actions, his assistants and office, his community activities, and even his wife and family—aside from his tech-

nical skill as a physician—that have an effect on the way his patients and acquaintances think of him and of the profession he represents. Nobody else can attend to these things as well as he can, and it is his "personal responsibility" to build them into the best public relations he can. Yet, as Melvin T. Munn, director of public relations for Blue Cross-Blue Shield of Texas, admitted, most of us "don't public relate as well as we know how."

Safety: A Problem for All

Safety is a major problem in the world today, and George can't solve it. It will take the time and effort of everyone to help promote and practice safety at all times if the answer is to be found. Physicians are valuable to this program in a professional way, but they also have a role as good citizens who know the facts —for instance, that of all children from ages 1 to 14 years who die from any cause, 2 out of 5 die as a result of accidents.

When the National Safety Congress is held later this month in Chicago, the American Medical Association's Council on Industrial Health again will co-sponsor a session on vision in industry. This is only one facet of the safety picture that will be highlighted in Chicago.

Although the Texas Medical Association has no organized subgroup devoting its time primarily to safety, several of its committees deal with some aspect of the problem—Committee on Industrial Health with occupational hazards, Committee on School-Physician Relationships with safety in athletics, Committee on Rural Health and Doctor Distribution with proper use of agricultural insecticides, Committee on Maternal Mortality with prevention of accidents in the delivery room. The Association also is cooperating in studies by Cornell University on automotive safety.

The Woman's Auxiliary to the Texas Medical Association has an active safety and rehabilitation committee. The Auxiliary suggests that as individuals, doctors' wives (and doctors, too) be informed of what the National and Texas Safety Associations are doing and of the safety rules and regulations of the community. The National Auxiliary hopes at least one full program for each county medical auxiliary will be on a phase of safety: safety in the home, safety in school (including driver training), GEMS (Good Emergency Mother Substitutes) for baby sitters and parents, or some other topic.

The Auxiliary also is encouraging its members to schedule motion pictures on safety for various groups with which they have contact as well as for the auxiliaries themselves. A number of films suitable for lay audiences may be borrowed from the Memorial Library of the Texas Medical Association.

Safety is everybody's business, but it has to be thought of in terms of each individual person's business.

Medical Education Needs Support

To maintain the present physician-patient ratio will cost an additional billion dollars for medical education in the next 18 years, Dr. Vernon W. Lippard of the Yale University Schools of Medicine says. He estimates that by 1975 all existing medical schools will have to be expanded and at least 25 more new ones built to produce the 2,000 more physicians who will be needed annually by then for a growing population.

Meanwhile, the *Journal of the American Medical Association** points out, a typical medical school can count on less than one out of every five budget dollars to come from tuition. The rest must come from endowments, gifts, or the United States treasury.

One of the chief efforts to combat the necessity for federal funds has been to obtain contributions from private industry, but to obtain

**Investment in Knowledge, J.A.M.A. 163:1483-1484 (April 20) 1957.*

such support requires the leadership of the medical profession itself. Since 1951, the American Medical Education Foundation has been campaigning for funds from physicians, and this year's concentrated effort will take place in Texas next month under the direction of the Texas Medical Association's Committee for the American Medical Education Foundation headed by Dr. D. J. Sibley of Fort Stockton.

Last year Texas physicians contributed $94,575 to medical education, $20,145 of it through AMEF. In addition, the Woman's Auxiliary to the Texas Medical Association raised $10,881. Yet, Texas medical schools are receiving considerably more than that in grants from AMEF and the National Fund for Medical Education (the industrial counterpart of AMEF).

Sizable contributions, which may be earmarked for specific schools and which are deductible for income tax purposes, are needed and may be given either through a local AMEF committee or to Dr. Sibley.

Another means for helping AMEF is by buying Christmas cards, designed especially for the purpose, offered by the Woman's Auxiliary to the Texas Medical Association at $2.50 for a box of 10. These cards may be ordered through the county auxiliary or directly from the Woman's Auxiliary, Texas Medical Association, 1801 North Lamar Boulevard, Austin. The Auxiliary also has sympathy and utility cards which can be sent in lieu of flowers or gifts in return for contributions to AMEF.

Doctors traditionally have accepted the responsibility of passing along the knowledge of their great profession to the young men and women who will join them as physicians. With operating costs continuing to mount in the nation's medical schools, financial support is a necessary means of keeping the flow of knowledge unfettered.

Noteworthy

A few months ago the Committee on Rural Health and Doctor Distribution sent information on economic poisons to members of the Association. At the Executive Council meeting last month, Dr. W. L. Wilson, head of the division of occupational health of the State Department of Health, reported specific instances involving 34 human beings who had been helped because of these booklets.

It is gratifying to observe such immediate and worth-while results from any project.

Perhaps it would be appropriate to mention again that physicians anywhere in the state who need technical information regarding poisonings but do not have access locally to a poison control center may call the Occupational Health Division of the State Department of Health in Austin, telephone GReenwood 6-2681 (after office hours, GLendale 2-1334).

What Will a Week's Wages Buy?

Following are the percentages of one week's wages in 1947-1949, 1954, and 1956 required to purchase the amount of medical care and other items that could be purchased with one week's wages in 1935-1939. The consumer's purchase of many goods and services has become favorable.

	Cost in Percentage of One Week's Wages		
	1947-1949	1954	1956
Physicians' fees	57	50	48
Hospital rates	87	100	99
Food	86	71	63
Rent	51	48	45
Transportation	61	58	52
Furniture	90	71	63

(Figures from American Medical Association Bureau of Medical Economic Research Miscellaneous Publication M-106B.)

President's Page

Facts Every Citizen Must Know

Our Constitution and the Bill of Rights as designed by our founding fathers set up the framework for the greatest republic the world has ever known. Under it the separate states and the individual citizen had rights and privileges that inspired initiative and competition as well as mutual cooperation, all of which are basic in the development and perpetuation of a strong free country.

From the outset, dreamers and idealists have tried to change our form of government. Only an enlightened people and dedicated public servants have been able to cope with the constant efforts of those who would weaken the powers of states and destroy the liberties of the individual. Below you will find a record of some decisions, some actions, and some facts which no patriotic, freedom-loving person can read without concluding that it is much later than we think. Only enlightened citizens and dedicated public servants can arrest or reverse this trend, which, if continued, will soon render us helpless pawns in the hands of an all powerful, bureaucratic, central government.

Did you know that the civil rights bill passed by the last Congress places everyone from the most lowly citizen to the governors of our states under direct control of the federal courts and the attorney general of the United States, neither of which are elected representatives of the people? Not since the days of reconstruction has there been a more severe blow to states rights and personal freedom.

Did you know that most of the diplomatic papers of international conferences of the last two decades have not been published? The Yalta Conference was published only after approximately 50,000 words of it had been censored.

Did you know that during the first 158 years of our country the federal government collected 406 billion dollars in taxes, during which time we fought and won six wars? In the last 7 years it has collected 433 billion dollars. And in 3 years of President Eisenhower's administration, 193 billion dollars were spent.

Did you know that we have soldiers in approximately 50 countries of the world and they are spending billions of dollars annually to prevent the spread of Communism? Yet, we are sending boatloads of

military supplies, federal surpluses, farm products—and even money —to Communist nations. Since we began this inconsistent fight against Communism, approximately 600 million people have been put under the Communist yoke. The strength of Communists in America is at an all-time high—in fact, they are nearly as strong in America today as they were in Russia when they took over the government.

Did you know that more than 12 billion dollars have been spent on the federal farm aid program in the past few years? Of that 12 billion dollars, one farmer in Oregon has been paid more than 200,000 dollars for not cultivating his 1,500 acre farm.

Did you know that between the years 1900 and 1955 the public school enrollment increased a little more than 2 times, while during the same period the operational cost multiplied 43 times?

Did you know that last year the United States Office of Education predicted that by 1961 Texas would need 18,757 new classrooms to take care of the anticipated increase of 355,900 new students? At the present rate of construction Texas will have 20,007 new classrooms, or a surplus of 1,250, according to the Office of Education figures; and this is being done without federal aid! Yet, President Eisenhower said recently that he will go all-out in the next Congress in his effort to get federal aid for schools.

Did you know that in 1952 during the campaign the Republicans promised to clean out the bureaucrats in Washington? Yet they are now recommending the addition of approximately 105,000 new federal employees to our payroll. The cost of the present bureaucrats to the American people is almost twice that which was necessary to run the federal government 20 years ago.

Did you know the doorkeeper of the House of Representatives in Washington receives $16,500 per year and his assistant $12,500 per year? Three years ago their salaries were $6,000 and $3,500 respectively. Their present salaries are above the average salary of the college presidents of America.

Did you know the number of medical school graduates is increasing in America much faster proportionately than the population of our country?

Denton Kerr

ORIGINAL ARTICLES

Nasal Injuries And Deformities In the Newborn

J. CHARLES DICKSON, M. D., F.A.C.S., and ROBERT M. DAVIS, M. D.

Houston, Texas

THE PROBLEM of nasal injuries in the newborn is one which involves the obstetrician, the pediatrician, and the otolaryngologist. Little may be found in the literature about this problem. We will discuss the extent of the problem, the various factors producing the deformity, and the treatment of the deformity and will give a summary.

Dr. J. Charles Dickson and his co-author are from the Department of Otolaryngology, Baylor University College of Medicine, and from Methodist and Hermann Hospitals; they presented this paper for the Section on Eye, Ear, Nose, and Throat April 29, 1957, at the Texas Medical Association's annual session in Dallas.

A careful review of the literature on nasal deformities in the newborn brings out a number of factors that cause deformities such as trauma, developmental problems, and racial characteristics. A survey of 282 consecutive births in white, Mexican, and Negro patients, including types of noses and number and kind of deformities, is presented along with recommended treatment.

REVIEW OF LITERATURE

The extent of the problem follows. Mosher[13] stated the septum could be thrown out of its groove in the premaxillary wing at birth and produce a deformity which would become worse as the child grew older. Metzenbaum[12] reported 1 out of 200 delivery cases in which the septum was displaced from the groove in the maxillary crest. He pointed out that the pressure through the birth canal depresses the nasal septum and if great enough, it will spring the septum out of its groove along the floor. When this occurs, the cartilage cannot spring back spontaneously. If this is not recognized soon, a permanent deflection of the septum results and obstruction occurs.

Ersner[7] stated that during parturition many nasal injuries result because of dystocia. He also stated that the literature mentioned the occipitofrontal and occipitomental diameters of the fetal head, but no mention was made of the occipitonasal diameter. He believed the nose had been overlooked to a great extent in evaluating newborn injuries. He measured the heads of 25 newborns comparing the occipitomental, occipitofrontal, and occipitonasal diameters and found a variation of 1 to 2.5 cm. of outward projection of the occipitonasal over the other diameters. In 23 living infants he had 2 cases of displacement of the columella. He thought it important to correct each deformity immediately, for a fracture results in a displacement and later callus formation. He believed that in his cases a callus which formed would in time produce a deflected septum and also that certain hump noses might be caused by nasal injuries at birth. He examined 20 children with a history of having been born by a cesarean section. In 9 of these cases cesarean section had not been done until instruments had been tried; all 9 children had deformed septums. In 9 there had been an immediate cesarean section, and all of these children had straight septums.

Howie[9] found severe septal deformities in identical twins with no history of external injury which he felt was due to birth injuries. The cartilage in each nose had been dislocated from the bony groove in the maxilla.

Carter[2, 3] found septal deformities very rare in broad noses such as Negroes have. He believed slight injuries led later to severe septal deformities. He stated that 75 per cent of Caucasians have deformed septums in later life. Salinger[14] stated that a large number of septal deformities are cauesd by trauma, and they are greatly overlooked in children. He stressed the point that a child's nose which has been injured enough to swell, bruise, or hemorrhage should be carefully examined under general anesthesia. Firestone[8] considered the lack of attention to the nose to be caused by the primary concern over cranial injuries. He also believed that the psychological effect of nasal deformities on a child and parent is much more than one realizes and should be thought of with every injury at birth or in early childhood.

Adkins[1] stated that most deflections are of the quadrilateral cartilage. He thought the bigger pelvic diameter in Negroes is also a factor causing less injury to the nose in Negro newborns. He believed the septal deviation is largely due to delivery. He even made the statement that those delivered in the left occipito-anterior position are more apt to have deviations to the right, and those in the right occipito-anterior position, deviations to the left. Cottle[5] found in white births 6 per cent of the noses of the newborn showed some deformity. In Mexican newborns the instance was less and in a group of Negro children rare.

Kirchner[10] found that a lateral displacement of the nose in the newborn is usually due to one of two types of trauma: recent, occurring during birth, or prenatal, occurring as a result of pressures applied to the nose during the late months of intra-uterine life. He stated that the first or birth injury type is due to excessive pressure on the cartilagenous portion of the nose during birth and usually consists of dislocation of the septal cartilage from the vomer with the resulting deviation of the cartilagenous portion of the nose from the midline. Usually, the nasal bones are uninjured so the treatment is a simple matter of replacing the tip of the nose in the midline between the thumb and the finger. Swelling or other signs of recent trauma may be present.

The second type of deformity consists of a lateral displacement of the bony pyramid as well as the cartilagenous septum. In contrast to the birth injury this type of displacement cannot be repositioned in midline even by means of instruments. Usually, this deformity is quite marked. Kirchner stated that practically nothing exists in the otolaryngologic literature to guide one in treatment. He reported 3 cases of marked deformity and deviation of the bony arch as well as the caudal end of the septum in newborns. All 3 of these cases had no treatment and after three months the nose resumed the midline position and appeared normal. He thought that this type of prenatal trauma was due possibly to a sudden blow against the bony pelvis or more likely prolonged pressure of the nose against a bony prominence.

Cottle[4] stated that deformities at birth were from two causes. One was from injury during labor. This type should be corrected immediately; otherwise, the deformity will become worse as the child grows older. The second occurs before birth from pressures within the uterus. This type is not as common as the first, but it is a more marked deformity. It is usually completely healed and shows no sign of recent trauma. Most of these cases will improve with time, but a few have to have plastic procedures later.

INVESTIGATION

We studied 106 white, 120 Mexican, and 56 Negro infants seen in the Methodist and Hermann Hospitals in Houston (table 1). They were consecutive cases of birth. In the white group the chin occiput measured on the average 13.7 cm. and the nose occiput averaged 13.6 cm. There were 7 evident external deformities in this group, or a percentage of 6.6. No intranasal examinations were made. All 7 cases had fairly normal labor with no complications. In the Mexican group of cases the chin occiput measured 13.5 cm., the nose occiput 13.1 cm., and the forehead occiput 13.9 cm. There were 5 evident external deformities or a percentage of 4.1 per cent. There were 24 internal deformities involving the septum or the maxillary ridge or a percentage of 20. In the Negro group of 56 cases, the chin occiput measured on the average of 14.9 cm., the nose occiput 13.8 cm., and the forehead occiput 13 cm. There were no external or internal deformities in this group.

TABLE 1.—*Deformities in 282 Consecutive Newborn Infants Seen in Methodist and Hermann Hospitals.*

	White 106 Cases	Mexican 120 Cases	Negro 56 Cases
Measurements (in centimeters)			
Chin occiput			
Average	13.7	13.5	15.0
Greatest	15.6	16.5	17.75
Smallest	12.0	11.5	13.3
Nose occiput			
Average	13.6	13.1	13.8
Greatest	15.0	16.25	15.5
Smallest	12.5	10.1	11.7
Forehead occiput			
Average		13.9	13.0
Greatest		15.0	17.5
Smallest		10.0	11.0
Internal deformities (no.)	?	24	0
External deformities (no.)	7	5	0
Average length labor			
First stage	5 hr.	7 hr. 4 min.	
Second stage	19 min. 7 sec.	28 min.	
Third stage	2 min.	10 min.	
Position			
Right occipito-anterior	5	3	
Left occipito-anterior	2	1	
Left occipitotransverse		1	

DISCUSSION OF FACTORS

The racial characteristics have a great deal to do with the development of nasal and septal deformities. As mentioned previously, numerous authors have stressed the fact that the racial characteristics help determine the frequency of deformities. A composite nasal base picture was made by us by averaging the nasal tip outline of the three groups of cases (fig. 1). This was done by projecting a picture of the base

of the nose on a white piece of paper and making a pencil outline drawing of the tip of the nose, the nostrils, and the upper lip. In each case the picture was adjusted so that the alar-facial junction was superimposed. From these superimposed lines a picture was drawn of an average nose where the lines were the most dense. These pictures show clearly the shape of the nostril and the width of the base. In the white children the tip is considerably elevated, the base is narrow, and the nostrils have an upward tilt. The nose occiput diameter is about equal to the chin occiput. All of these factors plus a smaller pelvis in the mother tend to make injury more likely in this group. Negroes have a low tip, a broad base, and round nostrils which

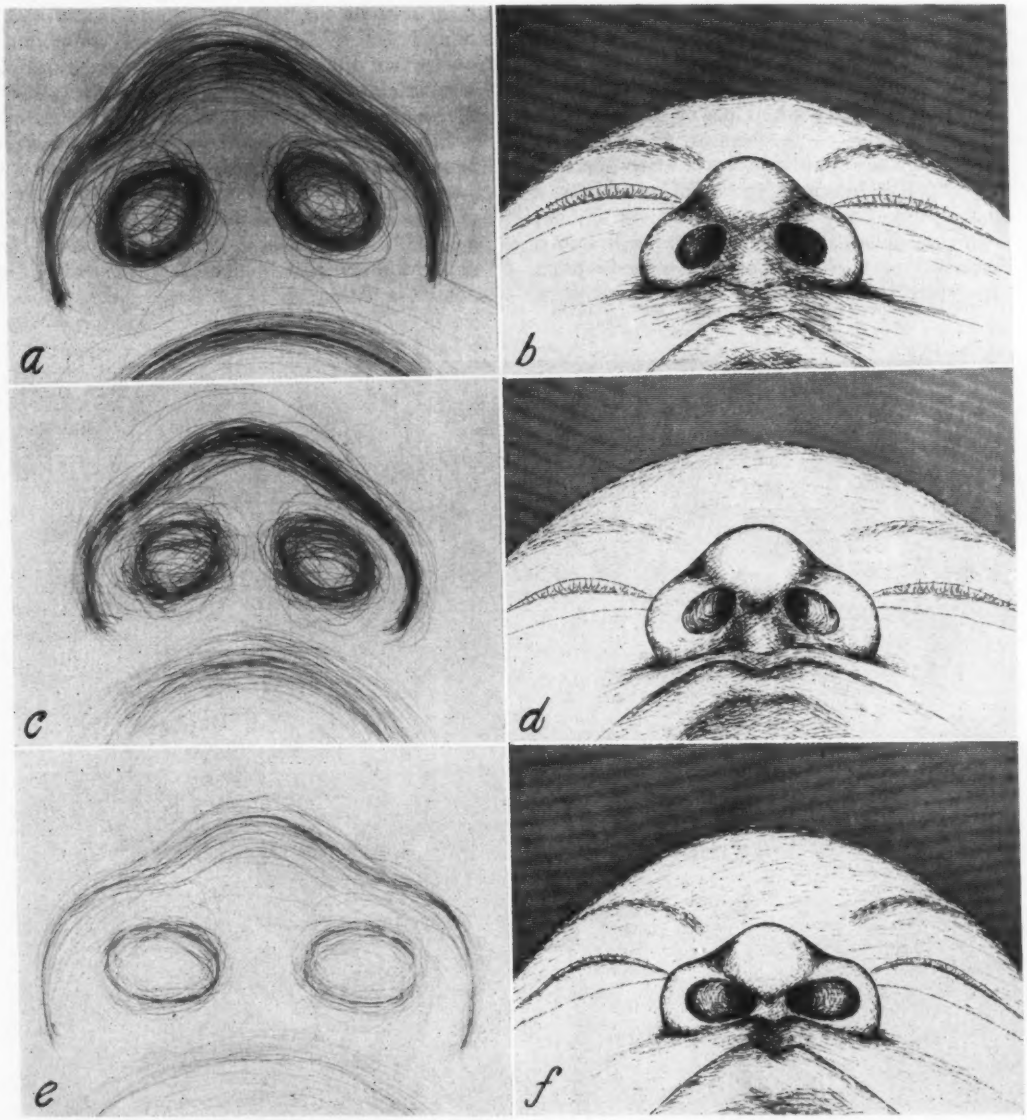

Fig. 1. Composite nasal base lines and base drawings of 250 consecutive deliveries of white, Mexican, and Negro babies in Methodist and Hermann Hospitals.

a. Base lines of 106 white babies.
b. Base drawing of average white baby.
c. Base lines of 120 Mexican babies.
d. Base drawing of average Mexican baby.
e. Base lines of 56 Negro babies.
f. Base drawing of average Negro baby.

are horizontal. The nose occiput diameter is much less than the chin occiput diameter. These factors, with a large pelvis in the mothers, in turn, lessen the chance of injury to the Negro babies' noses. The Mexican babies occupy a somewhat middle ground. The nose is not quite as high, the base is broader, and the nose occiput diameter is less in proportion to the size of the head than the white group but more than the Negro.

Cottle[6] has pointed out that the white race may inherit various factors from their ancestors. They may inherit a large septum but a small nose. The result of this is that the septum is placed under tension and buckling occurs. Thus, there occurs a deformity which develops as the child grows older without any injury. This type of nose is spoken of as one with a tension septum. Cottle also stated that with injuries and with the inheritance of varying growth factors not only is there a deformity of the nose and septum but also there is a deformity in the development of both the upper and lower jaws. The problem often is one that not only involves the septum but involves the entire face including the teeth. Some deformities occur from injuries during intra-uterine life. In our cases there were several marked septal ridges with no evidence of recent trauma. These must have occurred some time before birth.

Klaff[11] in an excellent article on anatomy of the caudal end of the septum brought out clearly that the septum rests in a groove in the premaxilla which, in turn, rests in a groove in the maxilla and this, in turn, is covered anteriorly by a thin projection of bony plate from the maxilla. In other words, the maxilla almost covers up the premaxilla except on the side where the quadrilateral cartilage rests in a v-shaped groove. Fibrous tissue goes from side to side at three junctions. This makes it easy for displacement to occur and also makes it difficult in separating the mucous membrane. Tears are usually produced at one of these junctions in doing a submucous resection. Mosher[13] also brought this out in an article written in 1907.

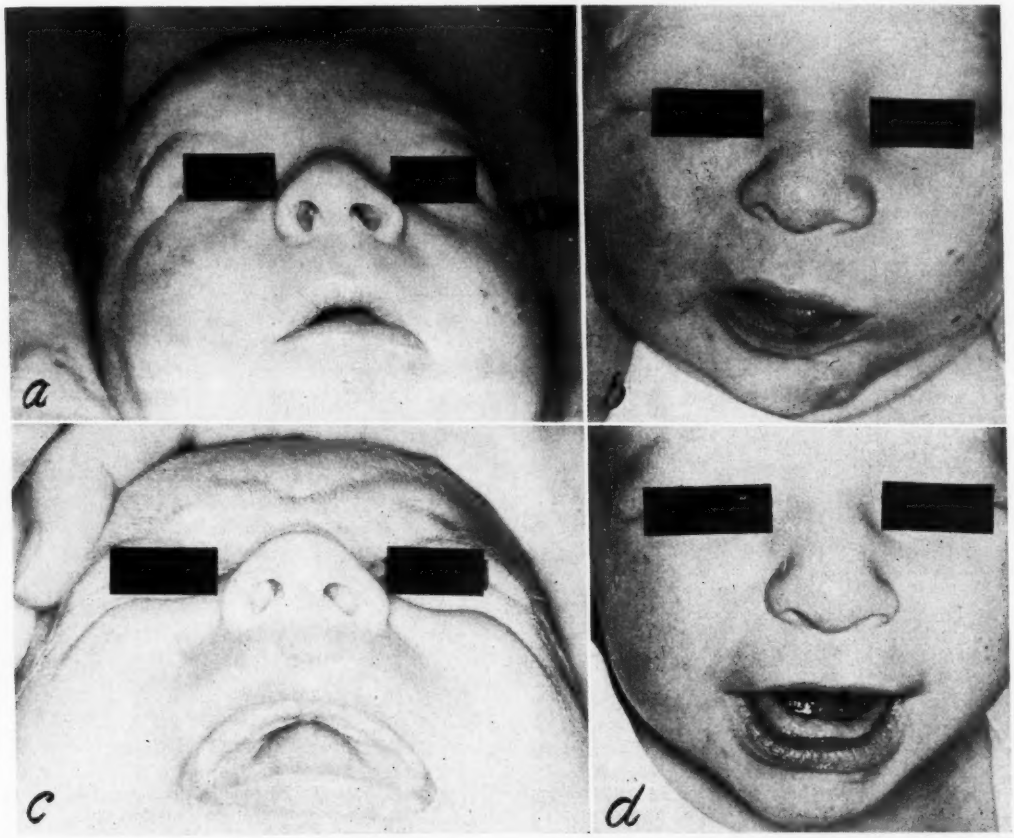

Fig. 2. a and b. Case 1. Deformity shortly after birth from base view and front view.

c and d. Case 1. Six weeks after birth no deformity from base view nor from front view.

TREATMENT

In the treatment of the injuries of the newborn those that have occurred prenatally, of course, cannot be corrected. Time, in Cottle's[4] and in Kirchner's[10] opinion, will partly correct these cases. All authors stressed the importance of immediate correction when the deformity has occurred at time of delivery. If the nose and septum are elevated and molded, the fractures and the displacements can be corrected in most cases. Very careful attention should be given to the location of the septal cartilage in the premaxilla and maxilla grooves. The cartilages of the nose tend to regain their normal shape as time goes on, but they can be helped considerably if pressure is exerted to push the nose back to the midline and to lift the septal cartilage up so that it will slip into the groove of the premaxilla and maxilla. This can be done with preoperative sedation and the use of a small amount of local anesthetic such as 2 per cent cocaine. A long small round instrument is placed in each side of the nose and upward pressure exerted. At the same time the tip of the nose is pressed toward the midline. No splint internally or externally is needed.

CASE REPORTS

CASE 1.—A baby was born in the Methodist Hospital with a history of finding a deformed nose at birth. The head had been in the pelvis of the mother for two weeks in a right occipito-anterior position. Birth was not unduly long or complicated. Examination showed a nose with the tip bent to the right; the septum was slightly to the left; and the left upper cartilage was pressed down against the septum (fig. 2a and b). The nasal bones were slightly involved. Treatment consisted of lifting up the tip of the upper lateral cartilages and the septum, and moving them back to the midline. This was done by giving ½ grain Seconal one-half hour before operation and using 2 per cent cocaine intranasally. A reexamination made six weeks later showed the nose and septum to be in the midline (fig. 2c and d). There were equal and adequate spaces under each upper lateral cartilage.

CASE 2.—A Mexican baby, born in the House Service at the Methodist Hospital, was found to have the tip of the nose pushed to the right (fig. 3a). The septum was deflected posteriorally to the right. The labor had been normal. The position was right occipito-anterior. Treatment consisted of lifting up and moving the tip back to the center. A recheck at six weeks showed the nose and the caudal end of the septum in midline (fig. 3b). There was still some deformity of the septum in the posterior part.

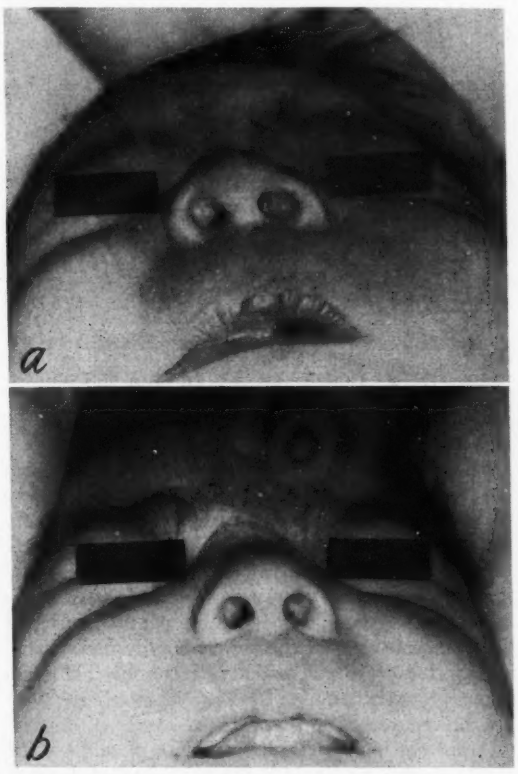

Fig. 3. a. Case 2. Deformity shortly after birth from base view.
b. Case 2. No deformity six weeks after birth.

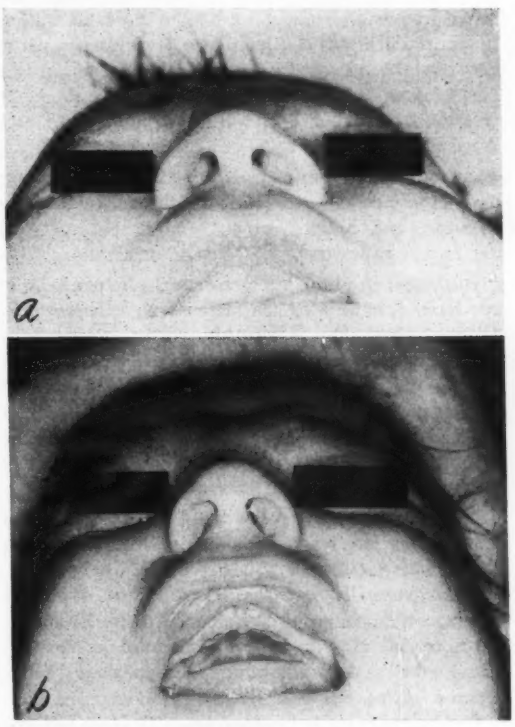

Fig. 4. a. Case 3. Only slight deformity from base view at birth.
b. Case 3. No deformity six weeks after birth.

CASE 3.—A Mexican baby born in the House Service at the Methodist Hospital was found to have a slight deformity of the tip of the nose to the right (fig. 4a). The inferior caudal end of the septum was displaced from the maxillary groove. There was a considerable ridge extending into the left side of the nose near the premaxilla. The labor had been normal and no complications had occurred. The head position was left occipito-anterior. No attempt was made to straighten this nose, and six weeks postoperatively the nose was found to be in the midline (fig. 4b). The deformity where the septum joined the premaxilla and the maxillary crest was still present. This is an example of a deformity which occurred prenatally. Externally there was little evidence of involvement, but as time goes on a marked deformity of the septum will occur without any external trauma occurring to the child.

CASE 4.—The infant was seen shortly after birth with a history of prolonged labor. The position of the head in the pelvis was right occipitoposterior, and low forceps had been applied. There was considerable swelling over the bridge and the nose was bent to the left. The septum along the maxillary crest was not displaced. Under a local anesthesia the nose was lifted up and moved to the midline. Three months later the nose and septum were found to be in midline with no deformity.

SUMMARY

Deformities of the nose in newborn infants are fairly frequent and may be due to prenatal trauma or injury during birth. Incidence of deformity varies between the various races being very low in the Negro race (0 per cent); moderate in the Mexican race (4.1 per cent); and high in the white race (6.6 per cent).

A composite base picture was made averaging a number of newborn noses for the three races—white, Mexican, and Negro—which brought out some of the factors influencing the rate of deformity.

Intranasal injury is more frequent, 20 per cent in our series for the Mexican race, than external injury, 4.1 per cent. The deformity chiefly involves the septum at the junction of the cartilage and premaxilla and maxilla. These cases are usually not discovered until later on in life as there is no sign of external injury. They are the cause of some of the deformed septums found later in life. No treatment at birth is indicated for this type of case.

External injuries are less frequent, 0 to 6.6 per cent, in our series and are due chiefly to trauma at birth. These cases show signs of trauma and deformity externally and internally. Treatment should be given these infants soon after birth by lifting up the nose and moving back to the midline, thus replacing the various anatomic parts in their proper position.

Uncorrected, these changes may develop later in life into a more serious abnormality causing internal and external deformities.

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Lesions of the Eustachian Tube: Management

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THE DIAGNOSIS and treatment of eustachian tube diseases have received increasing attention. The practicing otologist is consulted frequently concerning conditions related to the eustachian tubes. Despite these facts, it is noteworthy that many hospital residents and younger otologists are remiss in their training in dealing with tubal problems and their management.[1] Experience has proved that tubal catheterization is undertaken with considerable reluctance, probably because of inadequate familiarity with the procedure.

Apparent increase in the incidence of serous otitis media (otitis media with effusion) has rendered it highly important at all times to evaluate eustachian tubal function in involved situations. Although Polit-

zer[3] described tubal function and its treatment in 1869, it is only during the past 15 years that the problem has attracted renewed interest.

CAUSES OF OBSTRUCTION

Under the heading of obstructive causes, the most common source is lymphoid tissue. This may result from adenoid tissue, recurrent adenoid tissue, or peritubal lymphoid tissue about the pharyngeal mouth of the eustachian tube or in the fossa of Rosenmuller. Obviously, this is seen commonly in children, especially during the season of the year when upper respiratory tract infections are most frequent. In these patients adenoidectomy, or tonsillo-adenoidectomy, was done. In indicated situations myringotomy, eustachian tube inflation, and spot suction of the fluid contents of the middle ear were performed. Although surgical procedures in themselves may prove successful, irradiation frequently is required as supplemental therapy. In recent years, resort has been to roentgen irradiation of the nasopharynx of patients in whom peritubal lymphoid tissue persisted or recurred after operation. Roentgen irradiation was employed in preference to radium because of our conviction that the pathologic process can be more adequately retarded or controlled by the former procedure. As a basis for our therapeutic plan, an accurate diagnosis is indispensable. This entails satisfactory visualization of the postnasal space, even under general anesthesia, if necessary.

Dr. Claude C. Cody, III, clinical professor of otolaryngology, Baylor University College of Medicine, presented this paper for the Texas Air-Medics Association April 29, 1957, in Dallas.

A plea is made for increased instruction regarding lesions of the eustachian tube and their management. Lymphoid tissue is the most common source of eustachian tube obstruction. Irradiation frequently supplements surgical treatment. Careful history and physical examination are important in diagnosis. The middle ear is affected, and preservation of hearing and of tubal patency is of primary concern. Follow-up care is urgent.

Tumors of the nasopharynx almost invariably obstruct the eustachian tubes. These cases tend to emphasize the necessity of careful nasopharyngeal diagnosis, especially if there is unilateral tubal obstruction as evidenced by unilateral otitis media with effusion.

Nasal and nasopharyngeal infection, frequently preceded by an upper respiratory tract infection, is a rather frequent source of persistent tubal obstruction. This is seen as a pronounced edema and purulent exudate in the posterior choanae, or in the vault of the nasopharynx. Under these circumstances, it is usually desirable to resort to effective hygienic measures before tubal instrumentation is attempted. If, in some long standing cases of tubal obstruction, pus can be seen draining from the maxillary antrum over a tubal orifice, cure of the infection in itself may relieve the tubal blockage.

Nasal allergy always should be considered as a possible source of tubal obstruction. In my experience, this has not been as common as is frequently reported. Antiallergic regimen with avoidance of the offending allergens, or their desensitization, has resulted in alleviation of symptoms.

Aerotitis resulting from air travel, usually in the presence of an upper respiratory tract infection, is a pure and simple mechanical blockage of the eustachian tube. This results in a serous exudate, composed of a thin fluid.[6, 7, 8] In these patients, a favorable prognosis is afforded by indicated conventional therapy.

Chronic nasal infection, especially of the sinuses, always must be borne in mind. One patient with atrophic rhinitis with purulent crusts was seen in my series. The eustachian tubes were actually excessively patent, which allowed constant bathing of the tube and middle ear with pus, with pathologic changes in the mucosa of the middle ear. Cleansing of the nasal cavities of the heavy exudate eventually led to clearing up of the process.

Attenuated otitis media is being seen a great deal these days. Although chemotherapy and antibiotics have resulted in the otitis media becoming sterile and mucoid, these agents have not influenced the fluid content of the middle ear. This important situation requires careful management to prevent possible permanent damage to the middle ear and its structures. When surgical indications for incision and drainage are present, these measures should be done, regardless of how late the physician sees the patient or how little the ear seems to cause trouble. Cultures from these patients are usually sterile, the main presenting symptoms being those of impaired hearing after the child has had conservative therapy for a previous earache.

Malocclusion results in some encroachment on the patency of the eustachian tube. It should be considered when there is no obvious cause of obstruction, and when present, an effort should be made for its correction.

Viral and bacterial infections of the middle ear undoubtedly result in some cases of tubal obstruction

with extension down the tube. It is, however, usually difficult to prove because most cultures of the middle ear, associated with otitis media with effusion, are sterile. Some authors[4] have suspected a viral causative agent.

Trauma either to the tubal orifice or to the eustachian tube itself may occur. This, of course, is an irreversible process. Its diagnosis is thereby quite important in order to assess the proper prognosis in such a case. Trauma may be surgical (that is, adenoidectomy), inflammatory, or following over-enthusiastic attempts at bougienage (therapeutic).

Cleft palate cases frequently develop a tubosalpingitis as a result of the constant bathing of the nasopharynx while in the process of eating and drinking. It is common knowledge that many patients with cleft palate develop otitis media via the eustachian tube. This is observed also in patients in whom postnasal packs are left overlong, or in whom the stomach tube passed through the nasopharynx creates a reaction with subsequent obstruction of the eustachian tube. In some cases of regurgitation in which the nasopharynx becomes infected, the eustachian tube also becomes involved. Careful toilet to the nasopharynx usually clears up the tubal orifice and eventually the middle ear, unless irreparable changes have developed.

In my experience, autonomic dysfunction, sometimes referred to as physical allergy, has been the cause of some of the most difficult and resistant problems of tubal obstruction. Each patient of this group has to be managed individually. It is my thinking that if this phase of obstruction can be conquered, a large number of our most resistant problems of tubal obstruction can be solved. It is my belief, moreover, that many of the so-called allergic cases should be included in this group.

DIAGNOSTIC ASPECTS

In eustachian tube pathology, the history many times will suggest the diagnosis of the condition. The onset of a blocked ear after a cold, or after flying, or a sense of fullness in the head and the feeling as though the head is in a barrel, is good evidence that the eustachian tube on the involved side of the head is not ventilating the middle ear adequately. A history of tinnitus (cracking or popping of the ears), with temporary improvement of hearing, is an important clue. If an ear is partially filled with fluid, the patient experiences an improvement of hearing by tilting the head. Vertigo may be the result of tubal blockage, but one should be on the alert if the only symptom is dizziness. Vertigo may be the result of several processes, and only infrequently because of tubal obstruction. Thus, whereas it is important that a comprehensive history be taken, it is more essential that a good technique be developed in determining tubal patency.

PHYSICAL EXAMINATION

The physical examination is, of course, the most important step in ascertaining the presence of eustachian tubal pathology. The appearance of the tympanic membrane is a valuable sign as to the function or possible obstruction of the eustachian tube. Retraction or bulging of the ear drum, foreshortening of the long handle of the malleus, or the prominence of the short process of the malleus should be sought in every patient. The translucency of the drum, or its thickening and scarring, should be noted. And finally, the presence or absence of fluid in the middle ear must be ascertained. If the observer waits for a fluid line or the presence of bubbles before suspecting fluid in the middle ear, he will surely miss many cases of otitis media with effusion.

In many patients with the middle ear completely filled with fluid, the drum will not be amber or liver colored; it appears reasonably normal. This is probably one reason why the condition is missed frequently and not regarded to be as prevalent as it actually is.

Before resorting to hearing tests, it is well to determine the state of the nose, nasopharynx, and sinuses. This, of course, entails use of all available clinical and laboratory tests, the results of which give a fairly accurate measure of tubal patency and the degree of possible tubal disease. In very young children, Toynbee's maneuver or the transmission of sound through the eustachian tube on swallowing may be of some help. The source of sound is held at the nose, and if the tube opens on swallowing the sound may be heard louder at the ear on that side. Toynbee's maneuver is the to and fro movement of the tympanic membrane on swallowing due to the movement of air in and out of a patent eustachian tube. In small children, these two tests help to give presumptive evidence of a normally functioning eustachian tube. Such tests as the Valsalva maneuver and tubal inflation by Politzer's method, catheter, and bougienage should be resorted to until the true state of the function and patency of the eustachian tube can be accurately determined.

Good technique in tubal catheterization and bougienage is usually not taught to residents even in large medical centers. It can be learned only by long experience on private or clinic patients. Since most patients resent being hurt, a 4 per cent cocaine solution is applied in the nose and to tubal orifice before the inflation procedure is carried out. The nasopharyngoscope is placed in the opposite nasal chamber to inspect the tubal orifice. One should learn to

do this maneuver quickly and painlessly, making sure that the tubal orifice is correctly approached in the process.

In management of lesions of the eustachian tube, there are two objectives to be borne in mind: to preserve hearing and to preserve tubal patency. One may give undue attention to the hearing and miss the actual cause of impaired hearing. The eustachian tube must be maintained patent to prevent middle ear complications.

PATHOLOGIC CONSIDERATIONS

A pathologic condition of the eustachian tube is reflected in the middle ear. (1) Mucus in the middle ear is thick, sometimes almost gluelike with the protein content usually high. It is thought that the fluid most likely is the end result of an old or inactivated infection. The source of the fluid may be from the mucous glands at the medial end of the eustachian tube and, in some instances, added to by goblet cells seen in the lining epithelium of the middle ear and the lumen of the tube itself. (2) Serous fluid in the middle ear is usually of low protein content. The source is from increased capillary permeability in the presence of a negative pressure. This transudate develops as a result of mechanical and not inflammatory causes. (3) Certain types of middle ear blockage result from stenosis of the eustachian tube. The middle ear may be dry with adhesions, the end result of a long-standing tubal blockage, or the stenosis may be limited to the tube alone. This stenosis may be postoperative or postinflammatory. If only partial, it often is amenable to dilation therapy.

THERAPEUTIC CONSIDERATIONS

In management of eustachian tube lesions, to restate, one tries to preserve the hearing. To accomplish this, one must make all possible efforts to preserve eustachian tube patency. Inflation is the first maneuver that should be attempted. This may be done by auto-inflation (Valsalva method), swallowing with the mouth closed tightly, then attempting to build up enough pressure to force air into the middle ear, using the contraction of the tensor and levator muscles of the palate. Next, the use of the Politzer bag preceded by application of vasoconstrictors to the tubal orifice is tried, with the auscultatory tube to determine the patency of the eustachian tubes. Finally, catheterization and bougienage may be resorted to in an effort actually to inflate the middle ear.

Myringotomy should be done on all patients in whom fluid in the middle ear is suspected. In fact, I recommend myringotomy and inflation for all patients in whom the eustachian tube cannot be inflated, or in whom there is the question of tubal obstruction with some diminution of hearing. This may be done without anesthesia if the drum is not inflamed. As a preliminary procedure, inflation before myringotomy forces the drum away from the promontory which would be painful if scratched with the myringotomy knife. It helps to tell the patient that the pain is about the same as when a test specimen of blood is taken from the arm. I suggest the use of a very sharp myringotomy knife. Two incisions are made, one from 9 o'clock to 6 o'clock for the right ear, and one from 3 o'clock to 6 o'clock for the left ear.

When the first incision is made, it is interesting to note how bubbles enter the middle ear, showing the presence of negative pressure. The patient will sense immediately that the ear has become "unblocked." Then, tubal inflation is performed and spot suction made at the site of the two incisions. Rawlings has suggested mass suction while inflating the eustachian tube. The patient is then permitted to go home and employ self politzerization several times a day in an effort to keep the eustachian tubes open.

For the past year, after myringotomy, inflation, and spot suction, the plan of inserting a dry cotton wick in the ear canal against the drum incision, then placing the patient on a combination of an antihistamine and ephedrine by mouth, has resulted in a dry ear and a patent tube, usually after one myringotomy. The patient is maintained on this oral medication for four to six weeks. If there is fluid in the middle ear, the earlier this fluid is evacuated, the more favorable the prognosis for obtaining a dry ear. The longer the fluid has been in the middle ear, and the thicker (more mucoid) it is, the more difficult it is to clear up the ear and tube and prevent recurrence of fluid.

If a child requires myringotomy, the procedure should be done under a general anesthetic to permit a more perfected result. There should follow eustachian tubal inflation and spot suction of the middle ear. Under general anesthesia a more careful examination of the nasopharynx and nasopharyngeal orifice of the eustachian tube is possible. Presently a plastic tube is placed through the myringotomy incision to prevent early closure of the drum incision. Walter P. Work has suggested, in very resistant cases, the creation of a permanent perforation by elevating the annular ligament and removing a V segment of the drum along with a part of the annular ligament. This will sometimes give a dry ear and a permanent perforation. Obviously, this is reserved for those patients who have had repeated myringotomies, with only temporary relief of fluid accumulation. This procedure may be done to prevent a mastoidectomy,

especially if the mucosa of the middle ear, mastoid, and eustachian tube appear to have undergone irreparable damage.

It is assumed that all lymphoid tissue has been removed adequately by surgery, or by surgery and irradiation. Irradiation is most useful if peritubal lymphoid tissue and lymphoid tissue, within the lumen of the tube, exist. The aim is to permit the tube to open by itself for occasional and spontaneous ventilation of the middle ear.

Management of any allergic condition that may exist is essential. Nasal smears, and the history, help in the diagnosis. Preliminary skin tests aid in determining if there is an allergic tendency in the patient.

The incidence of endocrine dysfunction and intrinsic allergy (automatic dysfunction) has been assumed to be more frequent than true protein allergy. Endocrine dysfunction usually is corrected by thyroid, pituitary, and gonadotropic hormones. The boggy, swollen nasal mucosa and eustachian tubes return to normal after indicated therapy is administered for a short period of time. In my part of the Gulf Coast, the weather during certain seasons of the year definitely aggravates the nasal mucosa, producing nasal stuffiness, postnasal discharge, and blockage of the ears. Change of climate often clears up such situations promptly. Air conditioning has been especially troublesome to such patients.

The frequent use of nose drops and inhalers are definitely contraindicated. Pregnancy may greatly aggravate the nasal condition. Physical allergy or automatic dysfunction is helped by oral medication, such as an antihistamine with ephedrine. I have used Novahistine Fortis, phenylephrine hydrochloride, and Prophenpyridamine Maleate, by Pitman-Moore, and this is frequently supplemented with histamine and thiamine hydrochloride in an effort to allow some control over the autonomic function of the nose. In some cases, Bellergal (which contains ergotamine tartrate, a sympathetic inhibitor), Bellafoline (a parasympathetic inhibitor), and phenobarbital (a central and a subcortical sedative) have proved effective. Smoking and other forms of irritation are essentially hazardous in their effects on the nasal mucosa of some patients. Every effort should be made to restore the mucosa to a normal functioning structure.

Management of chronic nasal and sinus infections must be undertaken to ensure a clean toilet of the nasopharynx and the pharyngeal orifices of the eustachian tubes. When all else is in order, a tubal blockage with edema will persist in the presence of a low grade suppuration of the maxillary antrums or the ethmoid sinuses.

Blocked eustachian tubes should be treated early and often, to prevent irreversible changes. Self use of the Politzer method (after Rawlings) and pneumomassage have proved of value in maintaining ventilation of the middle ear, especially in resistant cases. Occasionally, the creation of a semipermanent perforation, or even a permanent perforation, may be resorted to, but only as an ultimate means of keeping the middle ear dry.

Rarely is mastoidectomy required. I have resorted to this step only when, (1) excessive fluid is obtained, obviously, largely coming from the mastoid (2, 3, or 4 cc. of fluid obtained after myringotomy and mass suction); (2) a well pneumotized temporal bone is present; (3) the tube is largely patent; and more important, (4) the hearing returns to a useful practical level after inflation and removal of the fluid.

Follow-up care of these patients is urgent. This is especially true of children who have had a previous tonsillectomy and adenoidectomy after which the ears have cleared up, but further recurrence either in adenoid tissue or in hearing loss have occurred. Adequate management is easier the earlier therapy is begun. Periodic audiometric check-ups, again especially in children, should be stressed, for one ear, or even both, may be impaired and go unnoticed for a long time.

Finally, it is hoped that the young otologist will endeavor in every instance to study the eustachian tube, its function, and its possible pathology. Many of our routine office patients have symptoms relating to this oft neglected and overlooked structure. A plea is made for increased instruction to our residents and even to our medical students, so that they may gain a better appreciation of lesions of the eustachian tube and their management.

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Veterans Administration hospitals are safe places for volunteers to work, so far as danger of getting tuberculosis goes. Although tuberculosis afflicts about one out of every 1,000 persons in the general population, a survey of Veterans Administration hospitals and other installations showed not one of the 11,375 volunteer workers developed the disease after coming on duty.—Sc. News Letter, Nov. 3, 1956.

Discarding Old Ideas in Otolaryngology

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THOSE of us out of medical school more than 20 years especially must guard against stagnation in practice. That is why we attend scientific meetings. What progress in our specialty have we missed? I do not believe we have changed our fundamental ideas of pathology enough. We have made superficial changes in treatments without basic change in thinking. Of course we must balance this with full realization that basic science does not change and with full appreciation of the value of the old and the proven. It is not easy to decide what to discard and what to hold.

Dr. Thomas W. Folbre, San Antonio otolaryngologist, presented this paper for the Section on Eye, Ear, Nose, and Throat April 29, 1957, at the Texas Medical Association annual session in Dallas.

Eight frequently used outworn diagnoses are enumerated. Chronic ear canal itch, commonly called "fungus," is more often a dermatitis or eczema. Vascular pain is still mistakenly called neuritis or neuralgia. Headache from vascular or muscle tension causes is too often blamed on sinuses. Inner ear disease is mistakenly blamed on the eustachian tube. In mastoid and sinus surgery too much emphasis is still put on tissue removal rather than on ventilation and drainage.

I do not believe that the role of vascular pathology in ear disease and headache has been stressed sufficiently. In practice we still have too many surviving ideas of the anatomical era of otolaryngology and have not shifted toward physiology enough. Some of our old ideas of the anatomical era have been so ingrained that they appear in our thinking without our realizing it. The basic importance of ventilation and drainage in sinus and ear disease is still not given its proper place.

OLD IDEAS

Let me enumerate old ideas that it seems to me should be discarded.

1. Chronic mastoiditis is a bony disease, the main correction of which is removal of diseased bone. This is not correct. Essentially, the condition consists of a locked off cavity infection that does not have proper ventilation and drainage. The mistaken bony disease idea leads to concentrating in surgery on removal of diseased bone, whereas the main concentration should be on thorough exteriorization of the cavity into the ear canal for purposes of ventilation and drainage. This principle holds true whether cholesteatoma is present or not. For example, let us say a surgeon operating for a chronic draining ear thinks he does such a thorough simple mastoidectomy that it is not necessary to connect the mastoid cells with the canal. He thinks he is operating to remove all diseased bone and has left out the main purpose for which operation was indicated, namely, permanent ventilation and drainage of the cavity. The principle of operating for ventilation and drainage often enables us to preserve the ossicles and thus save more hearing. I do not wish to oversimplify the radical mastoid operation but only to emphasize the main condition. Bony disease exists but it is secondary to the adjacent cavity infection. The infection is usually caused by a mixture of saprophytic bacteria that would not grow if the cavity were wide open.

2. Chronic maxillary sinusitis with a thick lining membrane is caused by a diseased membrane that needs removal. This is wrong. It is a cavity infection that does not clear up because of improper ventilation and drainage. It is corrected by making a large window into the antrum through the inferior meatus. In 9 cases out of 10 the thickened membrane then returns to normal. The Caldwell-Luc operation rarely should be needed.

3. Sinusitis is a major cause of headache. In reality sinusitis accounts for only about 5 per cent. The two main causes of headaches and head pains are neurovascular and neuromuscular irregularities. Most headaches can be treated by the otolaryngologist as well as or better than by any other physician, especially when the patient insists that the "sinusitis" be treated too. I know of nowhere in the practice of medicine that treatment is less of an exact science than in the management of headache. One has to base his treatment on what he guesses is the probable pathologic physiology of the pain. To think in terms of stretched blood vessels and tense muscles is an advance over old ideas of the anatomical era.

4. Supra-orbital neuralgia, sphenopalatine neuralgia, and glossopharyngeal neuralgia are nerve conditions, the causes of which are undetermined. This does not make good sense. How much better is the concept of a pain from blood vessel stretching, caused

by a disturbance in the normal vasomotor apparatus. In some people this apparatus goes haywire easily. The most accepted opinion is that the vasa vasorum are responsible. The small arterioles that supply blood to a section of arterial wall become spastic from vasomotor overactivity. The section of arterial wall becomes edematous and weak due to lack of blood supply and stretches under pressure of the blood. We know that blood vessels are painful when stretched. We know clinically that the arteries such as the supra-orbital and the temporal are found to be tender to touch. We know that vasomotor disturbances of the head and neck are common because of thalamic connections of head and neck sympathetic fibers. The thalamus, brain center for emotions, has direct connections with the head and neck sympathetic systems, but not with the sympathetic system lower down. This explains why localized vasospastic disturbances of the head and neck are more common than in the rest of the body. A generalized vasospastic condition of the arterioles is the cause of hypertension. These facts indicate that there is a very reasonable basis for vascular pain. It seems silly to cling to the diagnosis of neuralgia with the cause undetermined. Supra-orbital neuralgia can be explained on the basis of supra-orbital vascular pain. Sphenopalatine ganglion neuralgia and glossopharyngeal neuralgia usually can be explained by a maxillary artery and a carotid artery vascular pain, respectively.

5. The origin of Bell's palsy is in the facial nerve; the cause is undetermined; and there is no surgical treatment. There is great evidence to show that the cause is usually a neurovascular disturbance with edema in the facial canal and that surgical decompression is often indicated. There is also evidence that some trifacial neuralgias are neurovascular in origin.

6. A transient stuffy ear with popping always means eustachian tube trouble. In reality, the inner ear is usually at fault if there are no nasal symptoms. It is probable that neurovascular disease accounts for the inner ear trouble. I realize I am on unproven ground here, but patients demand treatment and we must therefore decide on the probable condition on which to base therapy. Patients who have inner ear disturbances are very often the same ones who have vasomotor rhinitis and vasomotor (or vascular) headaches; this fact is to me of important practical significance. Localized vasomotor arteriolar vasospasm and edema again provide the most reasonable explanation yet offered for this condition. In going over the past histories of these inner ear cases with a stuffy ear complaint, one is impressed with the time wasted on eustachian tube treatment. Here is a rather bothersome hangover of the anatomical era. One might ask, How does the inner ear pop? The answer is that the inner ear has canals and ducts that get blocked; these ducts can pop open as does the eustachian tube.

7. Chronic conduction deafness is usually catarrhal in origin. In my practice it is more often otosclerotic in origin. We see otosclerosis that for years has been mistreated by tubal inflation, radium, and the like. A common story of otosclerosis is that the patient has been treated in the past for retracted ear drum. The desire to find drum disease to explain hearing trouble has been so great that some physicians see retraction that is not there. Years ago otosclerosis was often diagnosed only late in its course. I can remember a few cases I failed to recognize. Even the authorities failed to realize how common the disease was. I recall hearing prominent otolaryngologists saying otosclerosis was being diagnosed too often. They were wrong. A confusing thing is that recurring catarrhal otitis superimposed on otosclerosis is fairly common. Autopsy studies on premature infants dying at or soon after birth have shown that an otosclerotic focus can be found in 6 per cent. Many people have silent foci that never become symptomatic. Otosclerosis is a much more common disease than we formerly thought.

8. Chronic external otitis is usually caused by a fungus or bacterial infection. This holds true for acute external otitis, but the chronic case is almost always based on dermatitis. The commonly heard statement by patients that they have a chronic incurable fungus infection of the ear is a regrettable fallacy. Personally, I have never seen a case of chronic incurable fungus external otitis. These cases are dermatitis based on three main causes. The causes in my opinion in order of frequency are scratching or picking the ears, seborrheic dermatitis or eczema, and atopic (contact) dermatitis or eczema. All three causes may be seen in one case. A seborrheic dermatitis may lead to scratching, which in turn leads to contact dermatitis. Secondary infection (usually saprophytic bacteria or fungi) due to scratching is common in all cases. The infection is relatively easy to cure. What is difficult is to break the scratching habit and prevent reinfection. A common complicating factor is ear skin allergy to allergens on the scratching fingers. The skin becomes sensitized to almost anything that the fingers might have on them or to the bacteria in the ear. It might be compared to a daily reimposed scratch test leading to sensitization of the skin. Let us say ear skin is allergic to newsprint. Then is it not sensible to keep the fingers off the ear? Itching often must be relieved by steroids or roentgen ray in order to break the cycle. Patients have to be educated gradually to the rules of proper ear hygiene, mainly the rule of hands off. Many culture and allergy tests that I have seen done in these cases often do not help unless the fundamental pathologic chain of events is understood. Fifty years ago

otolaryngologists preached the hands off rule of hygiene for the ears, because they noticed that the patients who dug into and scratched their ears had chronic ear canal trouble. Later on the emphasis shifted so as to blame fungus infection. Then cultures revealed the bacteria were usually responsible. Recently the emphasis is on the allergic dermatoses. Now I am suggesting that we go back to the hands-off-ears rule of hygiene as the fundamentally significant point in the pathology and the treatment. Here is one old idea that should not be discarded.

When some of the worst cases are cured, the patients are so susceptible to recurrence that they must be educated never to touch their ears with their hands at all. Hydrocortisone ointment is useful in these cases to stop recurring itching, but the cotton on the applicator should not be touched by the fingers. Ready made applicators must be used to avoid getting allergens off the fingers onto the cotton.

SUMMARY

What seems to me to be the most common basic errors in ordinary otolaryngologic practice today are enumerated. Hangover ideas from the old "anatomical era" are still bothersome. We have not fully appreciated the principle of ventilation and drainage. The importance of neurovascular disease has not sunk in. Too many patients are told they have chronic incurable fungus ear infection. Our chief errors in practice have been in fundamental concepts of pathology.

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ABSTRACT OF DISCUSSION

DR. FRED R. GUILFORD, Houston: Dr. Folbre's subject is an interesting and timely one. In regard to the surgical treatment of suppurative changes in the middle ear and mastoid, he has emphasized the importance of preservation and improvement of hearing when possible, in conjunction with removal of associated mastoid lesions. Adequate mastoid surgery often allows for complete removal of mastoid disease including involved mastoid cells, granulation tissue, and cholesteatoma, when present, without complete removal of the ossicular chain. With proper study of the cause for continued drainage in the form of cultures and sensitivity tests and applied indicated conservative therapy, infections limited to the middle ear often may be controlled.

When mastoid disease is suspected, the antral area can be explored through an endaural or postauricular incision without removal of the bony external canal wall. When necessary, simple or modified radical surgery with removal of the bony canal wall, is performed. When the antrum, epitympanic area, and mastoid are found to be clear of disease, the incision is closed without further mastoid surgery. The integrity of the ossicular chain may be investigated via the stapes mobilization approach when indicated. When the physician is satisfied that all middle ear and mastoid disease is controlled, myringoplasty techniques for the repair of tympanic perforations, or tympanoplasty techniques when the ossicular chain is involved, may be applied. This plan allows for investigation and complete removal of middle ear and mastoid disease with an excellent chance for restoration or preservation of the hearing function. I believe the classical radical mastoidectomy with its destruction of the middle ear air space and ossicular chain will have limited application in the future approach to this problem.

Dr. Folbre's discussion of modern trends in regard to therapy of mastoid disease, sinus disease, and vasomotor changes in relation to the ear, nose, and throat deserves mature consideration and an expression of appreciation.

Intussusception—Operative Versus Nonoperative Treatment

J. W. DUCKETT, M.D., F.A.C.S.

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FOR MANY YEARS in America and in England, operative reduction of acute intussusception in infants and children has been widely accepted as the treatment of choice. Recently, however, the policy of reduction by hydrostatic pressure with barium enema, as practiced in Australia and in the Scandinavian countries, has been promoted in this country. A criti-

Dr. J. W. Duckett, from the Children's Medical Center in Dallas, presented this paper for the Section on Surgery, April 30, 1957, at the annual session of the Texas Medical Association in Dallas.

For many years surgical treatment of acute intussusception has been practiced successfully. Recently Ravitch demonstrated that a properly controlled nonoperative method (barium enema reduction under fluoroscopic control) may be used with equal success and without the hazards of operation. This method has a definite value only for favorable cases and in a hospital under a surgeon's supervision, and the greater number of cases still are best managed by primary operation.

cal evaluation of the two policies is now becoming necessary.

Mortality with operative treatment during the early part of this century was appallingly high but has been steadily reduced. A number of recent series are reported with mortality ranging from 0 to 4.8 per cent. At the Boston Children's Hospital, the experience reviewed by Gross shows that mortality from 1908 to 1912 was 59 per cent, but from 1948 to 1950, there were 92 patients operated on without a death. Other reports showing no mortality or low mortality rates are listed in table 1.

TABLE 1.—*Reports of Favorable Results from Operative Treatment of Intussusception.*

Author	Location	Dates	No. Cases	Mortality (%)
Richter and Silver	Chicago	1946-1951	48	0
Packard	Denver	1944-1954	86	0
Condon and Oberhelman	Chicago	1946-1955	58	0
Jones	Newcastle, England	1951-1953	91	1.1
Thatcher	Milwaukee	1947-1953	53	1.9
Goldenberg	New Haven	1942-1953	37	2.7
Santulli and Ferrer	New York	1949-1954	41	4.5
Francis and Friedman	Providence	1933-1955	42	4.8

Earlier diagnosis as well as improvement in medical and surgical care are cited by all authors in accounting for the lowering of operative mortality. The experience at the Children's Medical Center in Dallas compiled in tables 2 and 3 illustrates strikingly the vital importance of early diagnosis and treatment. During the period of this study, from 1942 to 1957, there were no deaths in patients treated within 48 hours from onset of symptoms. One of the 7 fatalities in this series of 67 patients was of a month old infant admitted in a moribund state with bloody diarrhea of two days' duration. No treatment other than supportive measures was possible and diagnosis was made at autopsy. One died after operative reduction following a seven day illness. Another died following difficult operative reduction done 48 hours after apparent reduction with barium enema; this case is of especial significance. The 4 remaining deaths followed resection of irreducible intussusceptions.

It seems obvious from such statistics that fatalities are attributable not as much to the failure of the operative principle as to delay in diagnosis and initiation of effective treatment.

In spite of occasional deaths, mostly in neglected cases, the mortality rate continues to decline. In our series, during the years 1942 through 1949 there were 36 cases with 5 deaths, a mortality of 13.8 per cent. During 1950 through March, 1957, there were 31 cases with 2 deaths, a mortality of 6.4 per cent. While this small number of cases has no true statistical significance, a definitely favorable trend is indicated. It is good, but obviously not good enough. Is there a method other than surgical which might further improve results?

As previously stated, surgical treatment of intussusception has been employed almost exclusively in this country and in England. Reduction by hydrostatic pressure has been preferred for many years, however, in certain foreign countries, especially Scandinavia and Australia. In 1926, when mortality rates with surgical treatment ranged from 10 per cent to 45 per cent, Hipsley in Australia reported 100 cases treated by nonoperative means with a mortality of 5 per cent. It is surprising that such a report did not attract more users of the method in this country, but it was becoming apparent that results from operative treatment were improving and only a few adopted conservative treatment.

Early efforts at conservative treatment made use of plain enemas or colonic irrigations with or without massage or manipulation of the abdomen. Reduction by barium enema under fluoroscopic control was introduced in 1927 independently by Olsson and Pallin in Germany, by Pouliquen and De la Marnierre in France, and by Retan and by Stephens in America. Ravitch at Johns Hopkins is probably the most enthusiastic and successful advocate of controlled barium enema reduction in this country today. His are the only published reports from American hospitals in which barium enema reduction was used as the method of primary treatment in practically all cases since 1946. His results have been excellent, comparing favorably with the best results reported by those using operation as primary treatment. He has treated 72 cases with only 1 death.

It is important to note the use of the term "primary treatment." Obviously, operation with its inherent risks could be abandoned if all intussusceptions could be safely and completely reduced by controlled

TABLE 2.—*Acute Intussusception at Children's Medical Center in Patients 1 Month to 9 Years of Age.*

		Treatment					Mortality Duration	
	Total Cases	None	Enema Reduction Barium	Enema Reduction Plain	Operative Reduction	Resection	<48 Hr.	>48 Hr.
1942-49	36		3	3	24	5	0	5
1950-57	31	1	2	1	26	2	0	2
Totals	67	1	5	4	50	7	0	7

barium enema. The method has certain limitations, however, and these are frankly and emphatically recognized by Ravitch. He states, "The treatment of choice for intussusception in infants and children is radiologically controlled hydrostatic pressure reduction with barium enema, followed by operation if necessary to confirm or complete reduction if the lesion persists." Again he states, "Reduction by barium enema is as much a surgical procedure as is the closed reduction of a fracture. It should be performed in a hospital with fluids or blood being administered and the operating room in readiness. We feel strongly that while the cooperation of a pediatrician and radiologist is helpful and important, hydrostatic pressure reduction should be undertaken by the surgeon whose responsibility it is to decide whether an open operation is to be performed." Among the 72 cases treated with barium enema by Ravitch, 19 required immediate operation either to confirm or to complete reduction.

TABLE 3.—*Analysis of 7 Deaths from Acute Intussusception at Children's Medical Center.*

1. No operation (autopsy)	Admitted moribund, bloody diarrhea 2 da.
2. Operative reduction	48 hr. after apparent reduction with barium enema. 72 hr. after onset, bloody diarrhea.
3. Operative reduction	Diarrhea 7 da., bloody 12 hr.
4. Resection and anastomosis	Bloody diarrhea 5 da.
5. Resection and anastomosis	Bloody diarrhea 3 da.
6. Resection and anastomosis	Diarrhea 6 wk., bloody 24 hr.
7. Exteriorization	Died on table, bloody diarrhea 3 da.

From Denmark, where the barium enema method has been in common use for many years, Nordentoft and Hansen have reported on 1,838 cases collected from all Danish hospitals. A critical evaluation of the results is not too favorable for the use of barium enema reduction as primary treatment. In the years 1928 through 1935, there were 296 patients treated by hydrostatic pressure methods alone (barium enema, massage, water enema) with a mortality of 5 per cent; 289 patients treated by a hydrostatic pressure method requiring secondary operation with a 22.8 per cent mortality; and 450 patients by primary operation with a 25.8 per cent mortality. In the years 1944 through 1949, there were 413 patients treated by barium enema alone with a mortality of 0.5 per cent, but 302 patients were treated with barium enema requiring secondary operation with a mortality of 16 per cent; 74 patients were treated by primary operation with a mortality of 18.9 per cent. Although these statistics show in Denmark a definite superiority of primary conservative over primary operative methods, the over-all mortality rates are not as good as many of those reported in this country for similar periods, with primary operation in the majority of cases.

The use of barium enema under fluoroscopic control for reduction of intussusception is on the increase in this country. There is no doubt that it has definite value, but there is considerable doubt as to whether or not it should be used widely as primary treatment except in the most favorable cases. Ravitch has shown unquestionably that he can use it successfully as primary treatment, but it is likely that his success is attributable more to his own skill, judgment, and attention to detail than to superiority of the method itself.

It seems wise now to take a broader view of the treatment of intussusception than has been held in the past. As expressed in a recent article by Packard and Allen at the Denver Children's Hospital, "An attitude of always operation and never closed reduction has not been changed to always primary enema and never immediate operation. There has been, however, a trend toward primary enema in proper cases with operation to be expected in many." This is the point of view held at the Children's Medical Center in Dallas and also expressed by recent authors such as Goldenberg, Thatcher, Orloff, Francis and Friedman, Santulli and Ferrer, and Condon and Oberhelman.

Diagnosis of acute intussusception usually can be made without difficulty from the classical history and physical findings. Establishment of diagnosis by barium enema occasionally may be necessary and in some cases, unexpected reduction of the intussusception may result from the diagnostic barium enema. Even if there is apparently complete reduction shown under the fluoroscope, the patient should be immediately admitted to a hospital if not already there. He should be kept under careful observation for at least 24 hours and operation done immediately if symptoms persist or if evidence of recurrence appears.

If barium enema reduction is definitely planned or contemplated, the patient should first be admitted to a hospital and the operating room alerted. The procedure should be carried out preferably by the surgeon, but at least by the radiologist in the presence of the surgeon. The enema must be given with great care and gentleness. It is none too pleasant an experience for a well and healthy adult and may prove terrifying and exhausting to a sick infant or child. The bulb of the rectal tube must be accurately placed just inside the anal sphincter and inflated cautiously. Hartman has recently reported rupture of the bowel at the peritoneal reflection by an improperly placed and over-inflated bulb. The barium suspension should be administered under low pressure, the container never raised more than 3 feet above the level of the rectum. Higher pressures may rupture a segment of gangrenous intestine. Prolonged or repeated attempts should be avoided.

Interpretation of completeness of reduction is a

grave responsibility of the surgeon first and of the radiologist in support. The advancing head of the barium column must be observed repeatedly under the fluoroscope. Reduction cannot be considered complete until barium flows freely through the ileocecal valve and fills several loops of ileum uniformly. If the slightest doubt remains as to completeness of reduction, the patient should be transferred immediately to the operating room for surgical exploration.

Barium enema reduction should not be attempted when duration of symptoms is longer than 24 hours. This arbitrary time limit might be extended somewhat if symptoms are mild but should be shortened if symptoms are severe and rapidly progressive, especially if a shocklike state exists. The time element in successful treatment by any means has been well documented. In our own series, no deaths occurred in patients treated within 48 hours after onset of symptoms, but in most series, the mortality rate has rapidly risen after 24 hours. Modern methods for combating shock, dehydration, and toxemia may reduce somewhat the hazards of delay and should be employed promptly and vigorously in all cases, but earliest possible definitive treatment is still of prime importance.

An unfortunate aspect of the trend toward wider use of barium enema reduction has arisen. Its advocates have argued that since the average pediatrician or medical practitioner is somewhat resistant to operation, he will be more likely to call for surgical consultation early if he knows that barium enema reduction will be tried first and operation possibly avoided. Actually in many cases, the patient has been taken first to a radiologist, not always in a hospital, where barium enema reduction is attempted. If the attempt is not successful, dangerous delay of operation results. Some of these patients have been sent home after apparent reduction only to be rushed to a hospital later when the mistake is realized. One of our fatalities resulted from this type of mismanagement, and others have occurred elsewhere.

Another objection to the use of barium enema reduction is the possibility of overlooking a contributory bowel lesion which should be removed surgically. Although in approximately 95 per cent of intussusceptions in infants and children there is no recognizable causative factor, in the remaining group Meckel's diverticula, polyps, or tumors may be present.

CONCLUSION

Barium enema reduction under fluoroscopic control has a definite value in the treatment of acute intussusception in infants and children. It should be used, however, only for the most favorable cases and only in a hospital under the supervision of a surgeon so that operation may be done if necessary without dangerous delay. The greater number of cases will be managed best by primary operation.

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U. S. Trains 6,700 Foreign Doctors

To help meet the world's need for better medical care last year, the United States trained 6,700 foreign interns and residents from 88 countries. An increase of 10 per cent over the previous year, the substantial rise was due chiefly to the greater number of young physicians coming here from the far, near, and middle east. More than two-thirds of these doctors traveled from these areas and Latin America, reflecting the need in those countries for improved medical care and lack of local training facilities.

True progress in law, in medicine—in almost any area of vital human concern—will come from the discovery and cultivation of common interests by people who share a common purpose, unadulterated by special political objectives or ideological differences.—Editorial, World Med. J., May, 1956.

Technical Aspects Of Vagotomy-Gastroenterostomy

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THIS PAPER presents certain technical details of the vagotomy-gastroenterostomy procedure that I use. No discussion of the merits of the procedure as a surgical principle is included, but the results in about 50 cases have been very satisfactory.

Many articles on the technique of vagotomy have been published, most of them giving a detailed description of the anatomy of the vagi above and below the diaphragm,[1-12, 14-16, 18-21, 25-28] and every surgeon undertaking the operation should review this literature. Jackson[14-16] made a particularly detailed study, and those of Bradley,[1, 2] Chamberlin,[4] Dragstedt,[6-10] Mulholland,[20] and Walters[25-28] are especially helpful.

Dr. J. Peyton Barnes presented this paper before the Texas Medical Association's Section on General Practice April 29, 1957, during the Association's annual session in Dallas.

Technical steps to make vagotomy-gastroenterostomy easier and safer to perform are described. Preoperative and postoperative care is discussed. The procedures outlined are those used by the author in more than 50 cases with satisfactory results.

In brief, anatomists now agree on four main points:

1. The anterior, or left vagus, nerve and posterior, or right vagus, each contain both right and left fibers.
2. Branches leave the anterior trunk just below the diaphragm and pass through the gastrohepatic omentum to the liver.
3. The gastric branches of both vagi are distributed mainly to the lesser curvature of the stomach.
4. The posterior branch sends a branch to the celiac ganglion.

Furthermore, in from 60 to 80 per cent each vagus nerve will emerge through the esophageal hiatus as a single trunk; but in many cases one or both vagi will enter as a divided trunk.[2, 14-16, 23] Thus, a careful search must be made for all strands or the vagal section will be incomplete. Based on 100 dissections, Bradley,[1, 2] concluded that in 90 per cent of cases a transabdominal approach will allow as complete a division as the transthoracic, and the transabdominal is now the one of choice. Most of the literature reveals that a complete vagal denervation is the best procedure; however, Jackson[15] has described a technique which he thinks may accomplish complete gastric denervation and yet leave the main posterior trunk with its celiac branch, thus preserving the innervation to the spleen, kidneys, most of the pancreas, small intestine, large intestine, the distal part of the transverse colon, and part of the liver. His results are as yet unpublished. Dragstedt has expressed the belief that a transabdominal approach is best, and that the denervation should be as complete as possible. With this I agree.

PREOPERATIVE CARE

Many of these patients have considerable gastric retention. I hospitalize all of them for a few days preoperatively, put them on a liquid diet, and wash out the stomach each morning before any feeding and again at night 2 hours after the last feeding with from 1 to 3 quarts of warm soda bicarbonate solution. The tube is removed after each irrigation. The usual electrolyte studies, vitamin deficiency, and blood lack are taken care of during this period. After washing out the stomach on the night before surgery, 2 ounces of castor oil are placed in the stomach and the tube is removed. This drug is so effective in evacuating the colon and producing a scaphoid abdomen that its use is considered important.

On the morning of surgery an Einhorn double-lumen gastroenterostomy tube is passed, and I usually do this myself. One lumen goes all the way to the weighted tip, and the other lumen stops about 12 to 16 inches short of the end. When the gastroenterostomy is half completed, this tube is passed on down into the distal jejunal segment for about 12 inches. The tube permits continuous feeding postoperatively, with simultaneous deflation of the stomach. Any type of liquids may be introduced, and any liquids taken orally are sure to follow the tube through the anastomosis into the jejunum.

OPERATIVE TECHNIQUE

A true midline incision in the linea alba is used, and nearly always is adequate. It can be extended by making an angle cut across the left rectus muscle, as Dragstedt recommends, or one can remove the xiphoid process. I have done both, and where the

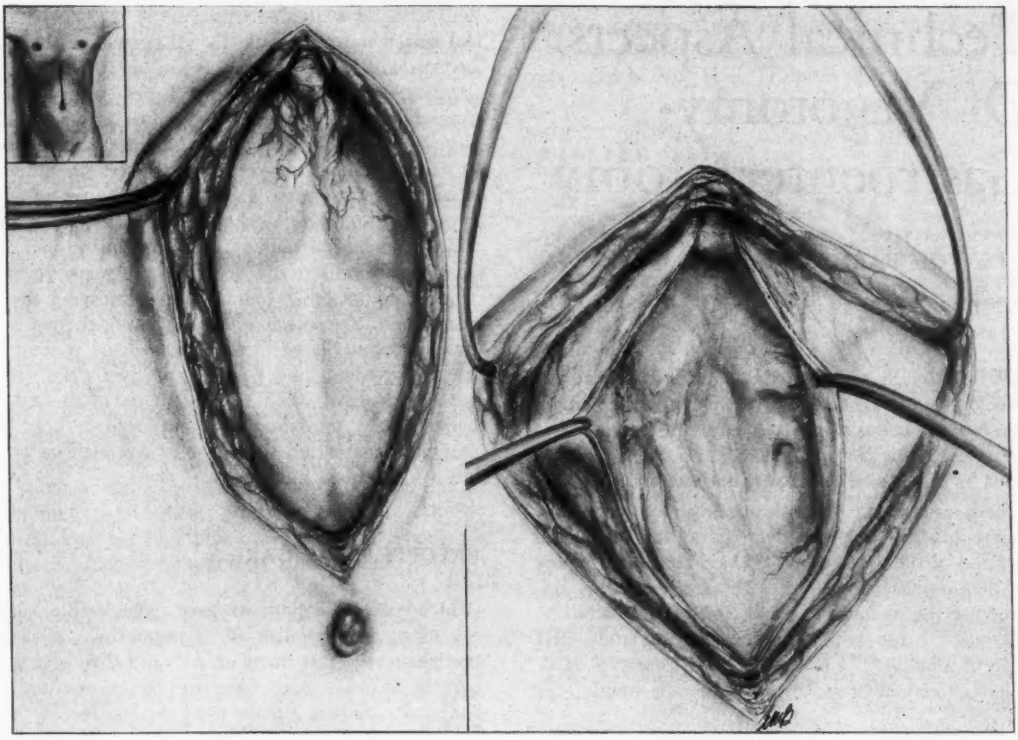

Fig. 1. The insertion shows the extent of skin incision; left is the linea alba; the right panel shows the incision in the linea alba with the peritoneum being pulled away from fascia on both sides.

xiphoid is very long or a bifid type, its removal surely does increase the exposure greatly. The transverse incision of Casberg[3] I have not used. After the incision is made precisely in the linea alba, the peritoneum is peeled away on both sides as widely as possible before it is opened (fig. 1). This allows wide retraction later of the edges of the incision without tearing the peritoneum. The peritoneum is now opened the full length of the incision, and at this point one decides whether and how to lengthen the incision. The table now is placed in a fairly sharp degree of reverse Trendelenburg, and this helps to displace the stomach and colon downward somewhat, with minimum traction. Next, a careful survey of all abdominal contents is made.

At this point many men sever the avascular ligament of the liver, but if the left lobe of the liver can be retracted adequately, this step will not be necessary in most instances. Crile[5] does not reflect it at all; by using the following technique I have not found it necessary either: The left costal margin is strongly retracted by the first assistant, using a wide-bladed retractor. The operator locates the back edge of the left lobe of the liver just over and a little to the left of the esophagus. This is easily done by palpating the duodenal tube. Then a wide-bladed ribbon metal retractor is slipped under the left lobe of the liver to this point, and the wide-bladed Deaver retractor, covered with smooth stockinette (fig. 2) is passed behind the metal blade, and the metal ribbon is removed. Unless one does it this way, it is difficult to pass the stockinette-covered blade to the exact spot one wishes. Now the second assistant retracts upward and outward, with just enough inward tipping of the retractor blade to pull the left lobe of the liver

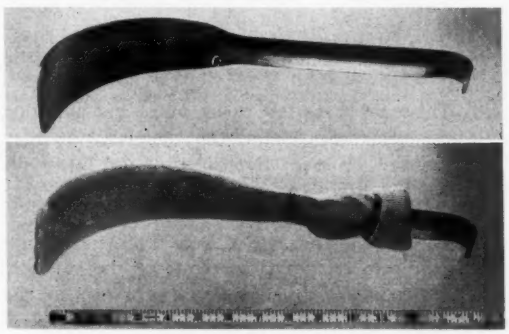

Fig. 2. The wide-bladed, gently sloping Deaver retractor, above, is covered with stockinette, below, to allow harmless and easy retraction at the left lobe of the liver.

slightly toward the costal margin. This procedure usually exposes the desired area very well. Placing a large lap sponge on the anterior surface of the stomach, the first assistant or the surgeon can gently pull the stomach downward without trauma. Palpation of the duodenal tube identifies the esophageal hiatus, and one should try to see the little whitish line that represents the fascial edge crossing this hiatus (fig. 3a). This is just about the best place to open the peritoneum. Whether one finds it or not, the peritoneum should be opened just below the junction of the crura of the diaphragm, and this opening is made through the peritoneum only. There are two plexuses of vessels here, one from the inferior phrenic arteries above, and the other from the left gastric artery below. If one stays between them, bleeding, which can assume frightening proportions, will be at a minimum. As soon as the crural junction is exposed, the anterior surface of the esophagus is gently cleared using a peanut sponge in a very long holder (fig. 4). This does not cause much bleeding. Then the right index fingertip is worked bluntly into the hiatus, and the esophagus partially mobilized. Now the left, or anterior, vagus nerve can be

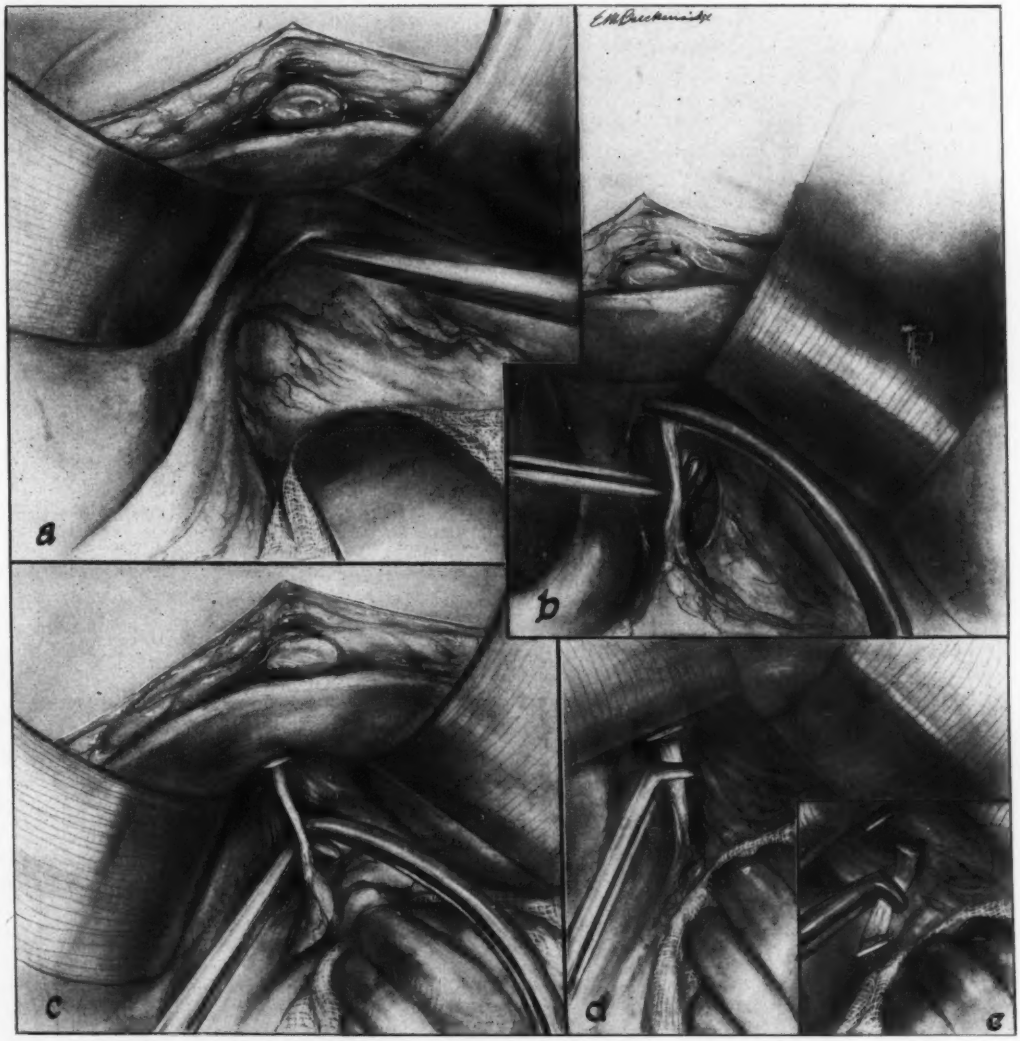

Fig. 3. **a.** The proper point to incise the peritoneum is just at the apex of the hiatus, or crural junction.
b. The anterior, or left vagus, is freed.
c. A silver clip is placed high up on the nerve (supradiaphragmatic).
d. The nerve is caught with a right angle clamp and incised just below the clip.
e. A distal clip is applied. Note line of section.

readily identified as a hard stringlike structure on the esophagus. It is dissected out, and a Lahey right-angle clamp placed across it about 1 cm. from its junction with the stomach (fig. 3b, c, d). A silver neuroclip is placed just distal to the clamp (fig. 3e), and the nerve is cut between the forceps and the clip. It is now lifted up, and dissected up to a supradiaphragmatic level; another clip is applied as high up as possible and the nerve cut distal to this second clip. Very little bleeding is encountered thus far, as a rule. A search is made for any additional fibers, and if none is found, location of the right, or posterior, vagus nerve is started. This usually is a much more tricky item than the left vagus.

This nerve lies somewhat to the right of the esophagus, and behind it. There is a distinct and appreciable amount of areolar tissue filling the space between it and the posterior esophageal wall. It seems to recede somewhat when the index fingertip searches for it, and I have found it much easier to see than to feel, for purposes of primary identification. The lateral border of the esophagus is carefully cleared as well as possible, with due respect to the arterial supply of the area. Then I place the end of a very long suction tube (fig. 5), which has two angle bends

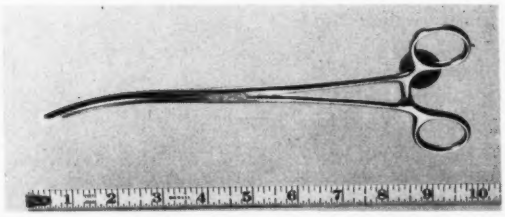

Fig. 4. Peanut sponge holder. Note length.

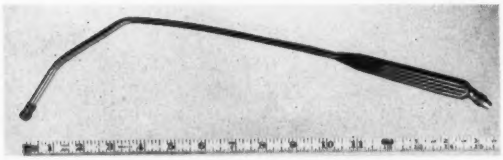

Fig. 5. Long suction tip with two angle bends instead of single curve.

in it, against the right side of the esophagus and kink it sharply to the left. A careful search of the U-shaped area, with good spotlighting, usually will show the heavy white streak shining through the areolar tissue above it. This is the nerve (fig. 6). It is caught up with a long nerve hook (fig. 7), and pulled up from its bed. A right-angled Lahey clamp is placed as before on the distal portion; a clip is placed just below this (sometimes one has to use two clips, as the nerve is rather large); and the nerve is cut between. It is dissected free upward as far as possible, and clipped and cut as previously described for the left vagus. A search is then made for any additional fibers. The peritoneum is not closed, but sulfa powder is sprinkled into the dissected area. Usu-

Fig. 6. The esophagus is kinked sharply to the left by the suction tip; the posterior nerve is underneath. Note clips on the ends of the anterior nerve.

Fig. 7. Long nerve hook-dissector combination. The curve of the hook helps to keep the nerve from slipping off once it has been pulled up.

ally a piece of Gelfoam is applied; then a long, dry, small sponge is strung out with one end left near the operative area and the other brought out the upper end of the abdominal incision. Any gross hemorrhage will show as the rest of the operation progresses.

The gastroenterostomy is done next. The important thing here is not so much *how* it is done, but *where* it is placed. The stoma should be placed at the most dependent part of the stomach, and this varies considerably with different patients. It is well to examine a roentgenogram of each patient taken in the standing position after a swallow of barium. This will be of great help. The point of choice usually is some 3 to 5 inches from the pylorus and in the middle of the greater curvature of the stomach itself. After a site on the greater curvature is chosen, this entire area is meticulously and carefully cleared of all blood vessels, each being ligated separately twice and cut between the ligatures (fig. 8). The stump on the gastric side should be as short as possible, and very fine ligature material should be used,

so that no interference will be created for the suturing of the anastomosis later. Along the greater curvature at this point the gastrocolic omentum joins the stomach by a double row of blood vessels, and these rows are from ½ to ¾ inches apart, more often ½

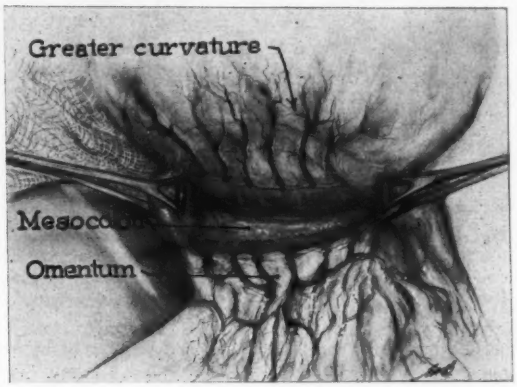

Fig. 8. In clearing of the greater curvature, note the double row of vessel stumps and the anterior layer of the transverse mesocolon.

inch. The gastroenterostomy stomal incision is made precisely in the center of this space. The area is cleared for about 3 inches, and the use of tiny mosquito forceps with a full curve aids materially in handling these small vessels. After these vessels are ligated and cut, the greater curvature is visualized perfectly, and the anterior surface of the transverse mesocolon is exposed (fig. 8).

The colon is picked up; its vessels are visualized; and the operator tries to select an avascular spot close to the center of the cleared greater curvature site and fairly well away from the colon itself (fig. 9). The placement of the opening through the mesocolon is of considerable importance, the main point being that it should not be too close to the colon, but rather well toward the posterior portion of the mesocolon. Unless the colon can swing downward freely and be separated from the anastomotic area by a good margin, it may adhere to and cause obstruction of the anastomosis. This occurred in only 1 of my cases, but I was duly impressed by the importance of this technical detail. Having made the opening, the operator brings the denuded greater curvature through this opening, and the mesocolon is then sutured all around to the stomach wall (fig. 10, top). Now the jejunum is picked up at the ligament of Treitz and followed along to the proper spot for anastomosis. One should not try to place the anastomosis too close to the ligament of Treitz, nor should it be an undue distance therefrom. The proximal loop should not be under tension, nor should it be a long, floppy

Fig. 9. Site of opening in the transverse mesocolon. Note the distance from the transverse colon.

loop. It should lie naturally in a smooth flowing curve, and the anastomosis should be isoperistaltic, not chosen especially for that reason, but because it does not twist the segment in any way.

The posterior row is placed, using a continuous 0 chromic gastrointestinal suture, and locking it at the far end. The surgeon should be careful to place the suture line rather close to and parallel to the posterior row of ligated vessel stumps on the greater curvature of the stomach (fig. 10). This produces somewhat of a curved suture line. Now an incision is made

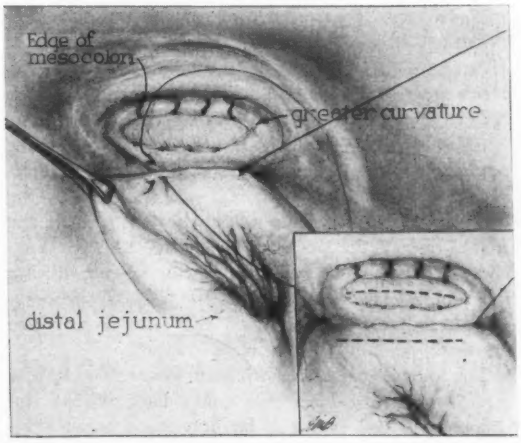

Fig. 10. An area of cleaned greater curvature has been pulled through the opening in the mesocolon, and mesocolon edges are sutured to the pouch of the stomach. The first posterior (outer) suture is placed. The insert shows lines of incision in the stomach and jejunum; these incisions go down to submucosa.

down the greater curvature just between the two rows of ligated vessel stumps of a chosen length, usually about 1½ inches, down to, but not through, the submucosa, and a corresponding one in the jejunum (fig. 10, insert). Several vessels in either structure now can be ligated, preventing bleeding later on. Now a lockstitch type suture, using 000 chromic suture, is placed (fig. 11, top). This is used only

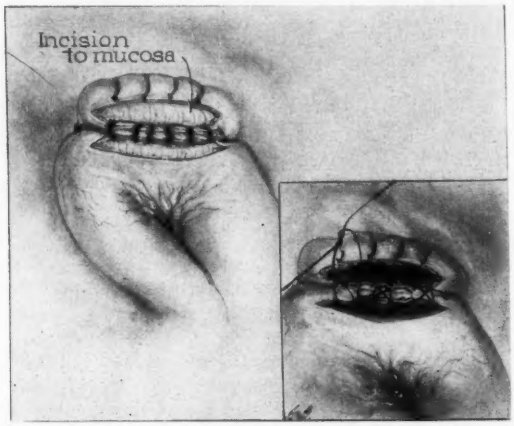

Fig. 11. Incisions are completed to the mucosa, and the second row of lockstitched 000 chromic suture has been placed. This suture is used only on the posterior row. The insert shows both lumens open and a row of interrupted figure-of-eight fine silk sutures in place. This completes the posterior row.

on the posterior line and is to minimize bleeding. After placement of this suture, the gastric and jejunal incisions are opened through their respective submucosae, and the final suture for the posterior row is placed (fig. 11, insert). This is an interrupted figure-of-eight type, using fine silk. Now the posterior row is complete, and the tube is fished out of the stomach and passed down into the distal jejunum. This is the least sterile part of the operation. The anterior row is begun, and the first row is interrupted Connell type, using 000 silk, followed by the continuance of the running stitch that formed the first suture of the posterior row (fig. 12). At each end about two reenforcing sutures are placed, uniting the jejunal wall with the gastric wall. If properly placed, the ones at the distal end tend to angulate the distal jejunum somewhat downward.

The area is sprinkled with sulfa powder, and great care is taken to place the colon back within the abdomen so that it lies as far downward beyond the site of anastomosis as possible. This is important. An inspection is now made of the vagotomy site, and if no undue hemorrhage is noted, the abdomen is closed, using 0 chromic suture on the peritoneum, and stainless steel wire, twisted, 000, on the linea alba.

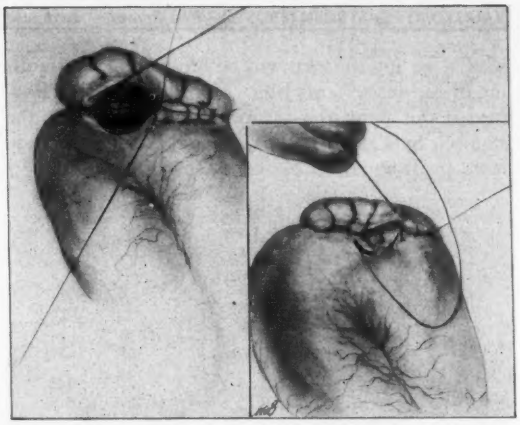

Fig. 12. Interrupted Connell fine silk suture completes the first anterior row. The Einhorn tube has been pushed down into the distal jejunum. The insert shows the closure, a continuation of the original continuous suture.

The literature says little about the amount of hemorrhage one may have while doing the vagotomy, but my experience has been that it can be alarming and disastrous. Its danger should never be minimized.

POSTOPERATIVE CARE

A Wangensteen suction is applied to the S side of the tube, keeping the stomach empty and preventing air from being swallowed. A continuous drip device is attached to the D or J side, and administration of 5 per cent glucose water is started in the recovery room; 2,000 cc. of this are given, followed by 1,000 cc. of Sustagen solution. The time for these three to run is figured for 24 hours. This is repeated each 24 hours. In addition, the patient is given water and small amounts of clear liquids orally. This helps to keep the stomach clean and promotes irrigation of the anastomosis. The usual electrolyte check is carried out, but it is rarely necessary to give any intravenous injections. Both sides of the tube must be irrigated at intervals to insure patency.

For distention, Urecholine, 5 mg. subcutaneously, is used in marked cases. Surgical Pituitrin suffices ordinarily. Rectal slushes are given twice daily, and each morning hot, wet compresses are applied to the entire abdomen for one hour.

Usually the tube can be removed in three days, and feedings of strained baby food are started. The patient is put on a soft diet about the sixth postoperative day, and after 12 to 14 days there are few restrictions.

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Congenital Aganglionic Megacolon

(Hirschsprung's Disease)

H. GRAY CARTER, M. D.

Dallas, Texas

HIRSCHSPRUNG[5] in 1888 first focused attention upon the clinical syndrome of severe constipation in infants exhibiting dilatation and hypertrophy of the colon without evidence of mechanical obstruction. Since that time, the disease has borne his name and undoubtedly will continue to do so. More recently the descriptive terms of congenital megacolon, aganglionic megacolon, and achalasia of the colon have come into popular use, and all are acceptable terms. I prefer the term congenital aganglionic megacolon, as it adequately describes the condition while excluding other types of megacolon.

Dr. H. Gray Carter presented this paper before the Texas Society of Gastroenterologists and Proctologists April 28, 1957, in Dallas.

Diagnosis and treatment of congenital aganglionic megacolon are discussed. Indications for and methods of nonsurgical treatment are given, as is a description of surgical treatment by excision of the aganglionic segment with endo-anal anastomosis.

By definition, congenital aganglionic megacolon is a disease produced by the congenital absence of the myenteric plexus from all or a portion of the large bowel. The aganglionic segment of bowel responds to normal peristalic stimulation by mass contraction which prevents the peristaltic movement of feces through the aganglionic segment, thereby producing an unrelenting partial obstruction of the colon. The actual megacolon is secondary to the partial obstruction and develops in the uninvolved segment of the colon as a normal compensatory response to the obstruction. The magnitude of the symptoms produced is roughly proportional to the length of the aganglionic segment.

The disease may be divided conveniently into three types:[6]

1. The short segment type comprises 90 per cent of the cases. The aganglionosis begins at the anus and extends proximally for a variable distance but not further than the distal sigmoid. Many children with a short segment involved survive the neonatal period and may live into adulthood without definitive surgical treatment.

2. The long segment type comprises less than 10 per cent of the cases. The aganglionosis begins at the anus and extends to the midsigmoid colon or higher. It may involve the entire colon and occasionally part of the small bowel. This type produces very severe symptoms. Immediate surgical decompression is necessary if the infant is to survive.

3. The central segment type is rare, but there are a few cases reported in which there are one or more central areas of aganglionosis with normal bowel both proximal and distal to the involved segment. Clinically they are similar to the long segment type, but the problems of diagnosis are compounded. Most of these infants do not survive unless diagnosis is made and surgical treatment is given in the neonatal period.

Congenital aganglionic megacolon must be differentiated from megacolon that is frequently seen in children and adults secondary to habit constipation, and megacolon secondary to organic narrowing of the colon or rectum.

DIAGNOSIS

The essential points for the diagnosis of congenital aganglionic megacolon are:

1. The onset of symptoms in the neonatal period. The condition is present at birth and the symptoms begin at birth or certainly within the first few days thereafter. The symptoms may be only severe constipation in the mildest cases, but more typically there are obstructive symptoms with vomiting and abdominal distention. The history of bowel function in the neonatal period is extremely useful in differentiating congenital aganglionic megacolon from secondary megacolon. If there is a history of a period of normal bowel function following birth, congenital aganglionic megacolon can be ruled out, and a search for other causes of the symptoms must be undertaken.

2. The demonstration by barium enema roentgenograph of an achalasic area of the colon. Barium enema examination of an infant is a trying procedure; however, it is with this examination that a definitive diagnosis is most likely to be made. Typically, the lateral

and oblique views are the most likely to show the lesion, which will appear as a constant area of narrowing and spasm just distal to the dilated and enlarged bowel. The rectum may appear normal or spastic. In the newborn, before dilatation and hypertrophy of the colon have taken place, it is often difficult to demonstrate the area of narrowing and spasm even with technically satisfactory roentgenographs.

3. Prolonged retention of barium in the colon of infants. Ehrenpreis[3] pointed out that in the barium enema examination of normal infant colons, there is a very forceful and immediate evacuation of the barium from the colon; however, in infants having congenital aganglionic megacolon, the barium is retained over a long period of time, often 24 hours or more. Although this may occur in obstruction of the colon from other causes, the absence of retention of barium in the colon of the patient almost completely rules out consideration of the diagnosis of congenital aganglionic megacolon. This point is especially helpful in the newborn infant before dilatation has taken place and in those infants with aganglionosis of the entire colon.

4. Palpation of an area of rectosigmoid spasm. Hiatt[4] and Klein[7] both have reported that in a number of cases of congenital aganglionic megacolon, an area of spasm due to the aganglionic segment is palpable in the upper rectum or lower sigmoid. Although this finding is not always demonstrable, when present it is often of considerable help in establishing the diagnosis.

5. The demonstration of the absence of myenteric plexus ganglions by biopsy. In cases where some doubt exists as to the diagnosis, biopsy of the internal sphincter muscle will prove helpful.

Swenson[18] and Bill[1] have published independently the details of the technique of obtaining the biopsy specimen. Except in the rare case of the central type of aganglionosis, it can be relied upon to demonstrate conclusively the presence or absence of myenteric plexus ganglion cells. Biopsy is especially helpful in cases in which the rectum is involved in the process of dilatation and hypertrophy, and there is a question as to whether the symptoms are due to habit constipation or a very short segment of aganglionosis. The patient who has had a colostomy done for aganglionic megacolon in the neonatal period usually will not show the roentgen-ray criteria for diagnosis of congenital aganglionic megacolon. There are several reports in the literature of resection and anastomosis of the rectum for aganglionic megacolon after a colostomy has been done, only to find that the colon and rectum contain normal myenteric plexus[1]. This error can be obviated by the use of the internal sphincter muscle biopsy.

TREATMENT

The treatment of Hirschsprung's disease is essentially surgical; however, many cases not of a severe nature lend themselves well to nonsurgical treatment for a time. Nonsurgical treatment consists of repeated enemas to remove the fecal matter, administration of dioctyl sodium sulfasuccinate to help prevent hardening and impaction of feces, and the judicious use of laxatives and parasympathomimetic drugs such as Prostigmin and Mecholyl Hydrobromide. With the diligent application of nonsurgical means, many patients will progress nicely and achieve normal growth and development. If the child can be managed by such treatment, it is usually better to delay surgery until sometime between the time the child reaches the age of 1 year and he begins school. Surgical treatment should be completed before the beginning of school, for even though the child's general health and growth are not affected by the disease, it usually will require him to be out of school frequently to secure evacuation of his bowels and will interfere markedly with his social and scholastic progress.

Three major complications must be guarded against constantly during this period of nonsurgical treatment. The first is water intoxication, which may occur suddenly during the administration of tap water enemas. Levinson[9] and others have made a rather detailed study of this situation and have recommended that tap water never be used for enemas. The much enlarged absorptive surface of the colon, coupled with the increased hydrostatic pressure when the hypertrophied colon contracts, may cause a phenomenal amount of water to be absorbed. This produces a marked fluid and electrolyte imbalance and occasionally actual shock. If shock does occur, the symptoms usually can be controlled rather rapidly by the intravenous infusion of hypertonic saline solution. The use of normal saline solutions or a 5 per cent agar suspension for the enema fluid will prevent this. Levinson[9] also has cautioned against the use of parasympathomimetic drugs during the administration of enemas. The stronger contractions of the colon increases the likelihood of water intoxication occurring.

Another not uncommon complication is ulceration of the colon caused by trauma from the mass of impacted feces or enemas. The use of highly irritative substances such as strong soap solutions and hydrogen peroxide should be avoided as they can produce chemical ulceration. If such ulceration does occur coupled with the marked increases in the intraluminal pressure, the likelihood of rupture of the colon is great. When rupture of the colon occurs, it is usually fatal. Meticulous attention to evacuation of the bowels is required to prevent the formation of large fecal impactions.

The third complication that is mentioned frequently is the occurrence of gastroenteritis. For some reason not well understood, the usual attacks of gastroenteritis with diarrhea which are so common to childhood are poorly tolerated in children with congenital aganglionic megacolon both preoperatively and postoperatively. The gastroenteritis is frequently fulminating, causing rapid dehydration and death if it is not brought under control quickly. The occurrence of gastroenteritis in these children warrants immediate hospitalization and vigorous treatment to bring the infection under control.

Colostomy performed in the normal segment of bowel will relieve the symptoms of congenital aganglionic megacolon. It should be the initial treatment in those infants who are premature, who show evidence of complete obstruction of the colon, or who are otherwise poor surgical risks. Occasionally it should be used in the older patients whose bowels are so dilated and thickened that it would make the performance of an anastomosis precarious. With the advent of the colostomy, the bowel over a period of time will return to almost normal size, and then definitive surgical treatment can be carried out without difficulty.

Many recommend a colostomy as a temporary procedure for all newborns who do not respond readily to nonsurgical treatment, and prefer to delay to the age of 1 year or more the definitive surgical treatment. However, there are increasing reports in the literature stating a preference to proceed with the resection of the involved segment of the endo-anal anastomosis in those newborn infants who are otherwise acceptable surgical risks. If a colostomy is indicated, it is much preferred that the colostomy be done in the sigmoid colon just proximal to the area of aganglionosis. This has the advantages that the fecal content will be more solid, the colostomy more easily can be cared for, and at the time when definitive surgical treatment is undertaken, the area of the colostomy can be resected along with the remainder of the bowel, thus preventing the necessity of a second procedure to close the colostomy. At the time such a colostomy is done, a frozen section examination of the bowel wall should be made to prevent the colostomy being placed in the aganglionic area of the bowel.

Most of us, with one or two notable exceptions[11] by this time have accepted the aganglionic segment of bowel as the cause of Hirschsprung's disease and on that basis are performing some modification of the abdominal resection and endo-anal anastomosis of the colon as originally described by Swenson. This type of operation has been eminently successful in the hands of nearly all authors reporting in the literature.

There are several excellent descriptions of the operative technique and its modification included in the bibliography.[8, 11, 14] To avoid repetition, I will call attention to only a few features that I consider especially important to this surgical technique:

1. The proximal point of division of the colon must be made in normally innervated colon. This point is chosen because it is well proximal to the junction of the dilated bowel with the normal appearing rectum; there is demonstration of normal peristalsis; and the bowel is of such caliber and thickness that it can be anastomosed successfully to the distal rectum. When this point is determined, the presence of normal ganglions always must be confirmed by frozen section microscopic study. Clinical judgment is usually accurate, but occasionally it is misleading and it is an unforgettable error to perform the anastomosis in an aganglionic segment of bowel. No hesitancy should be had in dividing the inferior mesenteric and the middle colic arteries, if necessary, to obtain adequate mobility of the bowel.

2. The distal point of dissection must be carried completely to the pelvic floor where the levator ani muscle joins the rectum. This is always a few centimeters farther than the operator would like.

3. In contrast to the usual surgery for malignant lesions in this area, the dissection of the rectum must be kept very close to the bowel. This is accomplished by using sharp dissection almost entirely, even at the possible expense of inadvertently entering the bowel. If this principle is strictly adhered to, injury to the pelvic parasympathetic nerves will be a remote possibility, and impotence in the male can be avoided.

The technique of the endo-anal anastomosis is unique and warrants a little more detailed discussion. With the completion of the abdominal dissection some operators prefer to excise the bowel from the abdomen, then evert the rectum and pull the cut end of the bowel through the everted rectum. Others, including myself, prefer to leave the bowel intact and, after preparation of the perineal field, insert sponge forceps through the anus, grasp the bowel, and by gentle traction prolapse the whole mobilized segment through the anus.

A circumferential incision of approximately one-fourth of the circumference of the prolapsed rectum is then made as close to the anus as is convenient, exposing the serosa of the proximal colon. The area previously determined by biopsy should have been marked by a distinctive suture; this area is located through the rectal incision to be sure it is distal to the point to be divided. The anastomosis is then begun in reverse to the usual manner, suturing the external layers of the rectum to the serosa of the colon. As the suturing progresses the incision is successively extended until it completely circumcises the rectum. The protruding proximal bowel is then divided at the suture line, and the external layer of the anastomosis, suturing mucosa to mucosa, is completed.

A slight push of the finger and the rectum returns to its normal position.

The endo-anal anastomosis performed as described is technically much easier than low anterior anastomosis performed from the abdomen, and the anastomosis can be made much closer to the anus. The anus and a short cuff of rectum are preserved so that the normal defecatory reflex is preserved. It is not necessary to disturb the internal sphincter or the levator ani muscle so there should be no difficulty with continence following the operation; in fact it is gratifying when operating on the older children to find that they usually are having normal bowel movements within 24 to 48 hours after surgery. The patients tolerate the operation well, and their recovery usually is surprisingly rapid.

SUMMARY

In summary, I would like to reemphasize what I consider to be the cardinal points in the diagnosis and treatment of congenital aganglionic megacolon.

1. The prolonged retention of barium in the colon following barium enema roentgen-ray examination is the most constant objective finding. This may be present in other conditions producing similar symptoms, but its absence casts grave doubt and indeed almost eliminates congenital aganglionic megacolon from consideration.

2. The onset of symptoms in the neonatal period is the constant subjective finding, and similarly its absence makes it unlikely that aganglionosis is the cause of symptoms.

3. A constant area of spasm of the rectum or rectosigmoid area seen on the barium enema roentgenograph is diagnostic when demonstrable, but may be very difficult to demonstrate especially in the newborn period.

4. When the diagnosis is suspected but cannot be completely substantiated by usual diagnostic studies, a biopsy of the internal sphincter muscle at the dentate line of the anus will resolve any doubt by proving the presence or absence of normal myenteric plexus ganglions.

5. Nonsurgical treatment, except in the mildest forms of the disease, is exceedingly tedious, time consuming, and at times dangerous. Its use should be limited to preparation of the patient for surgery.

6. During the period of nonsurgical treatment, great caution must be exercised to prevent water intoxication and ulceration of the colon. During this period gastroenteritis is a major complication warranting prompt and vigorous therapy.

7. Surgical excision of the aganglionic segment with endo-anal anastomosis as described is a safe and curative procedure. The possibility of impotence in the male following surgery has been a source of concern, but recent reports indicate that it is a rare occurrence after properly performed surgery.

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Hospitals Said More Productive

General hospitals in America today are more productive than they were two decades ago, reports the Health Information Foundation.

Between 1932 and 1952, the annual number of patients admitted to the typical nonprofit community hospital more than doubled, and part of the increase was due to the addition of 30 beds to the 194 available in 1932. More important, according to the foundation, were a more extensive use of existing beds—93 per cent occupancy in 1952 as compared with 70 per cent in 1932. The patient's length of stay was reduced from 12.8 to 9.8 days. The annual death rate at the hospital has declined by one-third.

Health Conditions, Population Growth

The new yearbook of the World Health Organization contains more than 580 pages of figures showing the population of each country, its growth, and most prevalent illnesses. A new section of the book deals with health personnel, the number and distribution of hospitals, and vaccinations of various types carried out in each country. This book is available from WHO's regional office, 1501 New Hampshire Ave., N.W., Washington 6, D. C., at $10 per copy.

Roentgen Characteristics Of the Malignant Lymphomas And Leukemias In Childhood

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LYMPHOMAS and leukemias are categorized as diseases of the reticuloendothelial system, the interrelationship of which is complex and poorly understood. It is not uncommon for the clinical and histologic characteristics of the various lymphomas to lack sharp lines of division, and multiple biopsies from the same patient may demonstrate typical histologic criteria of different forms of the disease. Herbut, Miller, and Erf[14] have reported 6 cases in which lymph node biopsy from three separate areas of the body of each patient revealed typical histologic pictures of lymphosarcoma, Hodgkin's disease, and reticulum cell sarcoma. The picture of lymphatic leukemia may be associated with any type of lymphosarcoma, particularly in its later stages. It is therefore not surprising that the gross morphology of these diseases is identical radiographically.

Dr. Robert L. Egan (assistant radiologist) and his co-author (associate radiologist) are associated with the University of Texas M. D. Anderson Hospital and Tumor Institute; they presented this paper in Dallas April 29, 1957, for the Section on Radiology of the Texas Medical Association.

In addition to the usual changes observed in the mediastinum, liver, and spleen of children with leukemia or one of the lymphomas, invasion of the bone is encountered. The recent increase in survival following the administration of various chemotherapeutic agents has resulted in some additional roentgen signs which are generally not related to these diseases. The characteristic systemic findings are given, as well as examples of changes now found in the brain, kidneys, and skeletal system.

The role of the radiologist in the diagnosis of these conditions is not a satisfying one. Since the individual entities are not distinguishable radiographically, he must limit himself to generic terms. Further, with the exception of an occasional case of lymphoma of unicentric origin in the mediastinum, it is his task to arrive at such a conclusion by findings which are invariably signs of advanced disease. Usually the radiologic examination augments rather than supercedes clinical methods. Readily observable and measurable findings such as enlargement of the liver and spleen, lymphadenopathy, alterations in the peripheral blood and bone marrow, and fever serve as adequate clinical indications of the course of the disease. However, the propensity of the disease to manifest itself in parts of the body not amenable to inspection and palpation amply justifies the need for familiarity on the part of the radiologist. Not infrequently information gleaned by radiologic methods points the way to a diagnosis that is not immediately obvious clinically.

Mediastinal adenopathy is probably the most frequent roentgen finding, yet many diseases may be responsible and only in the late stages is the inferential diagnosis obvious. Similar perplexities are encountered with liver and spleen enlargement, retroperitoneal masses, and isolated tumefactions. However, the changes seen in bone and kidney are reasonably characteristic and, with one exception, should lead to a proper diagnosis when present.

Recent publications have called attention to cerebral and meningeal leukemic infiltration as a cause of increased intracranial pressure and an apparent biologic relationship between mongolism and leukemia. Although they are not diagnostically specific, these findings are important from the differential and etiologic standpoint and deserve reemphasis.

OSSEOUS LESIONS

The bone changes in the malignant lymphomas and leukemias are neither uniform nor constant. Variable response to the proliferating reticulum cells is seen not only in the same patient, but in the same bone. The most obvious alterations occur in the metaphyseal regions as in most diseases involving bone during growth; although the tubular bones are more frequently affected, lesions may occur in any portion of the skeleton. This tendency for diffuse involvement correlates with the intense hematopoietic function of the marrow during early life. Replacement of functioning red marrow through malignant hyperplasia of the reticulum cells results in extramedullary hematopoiesis and expansion of the marrow cavity. Relatively rapid alteration of adjacent bone then en-

sues in contrast to the adult wherein large masses of fatty marrow may be replaced before osseous disease becomes obvious.

Silverman[12] has written extensively on the bone changes and has classified them as (1) osteolytic, (2) subperiosteal new bone formation, (3) transverse bands of diminished density, and (4) osteosclerosis, in that relative order of frequency. This corresponds to the incidence of the various types of response in our group of cases. Pure types are seldom encountered; the usual pattern is one of multiple forms, frequently in the same bone.

Osteolytic response is seen in approximately 50 per cent of the skeletal lesions but is not always obvious. This type of reaction results from resorption of the spongiosa and adjacent corticalis and the lesions may vary from relatively large areas of destruction to a diffuse "flea-bitten" appearance of the bone (figs. 1, 2, 3, and 4). Progression to extreme degrees of

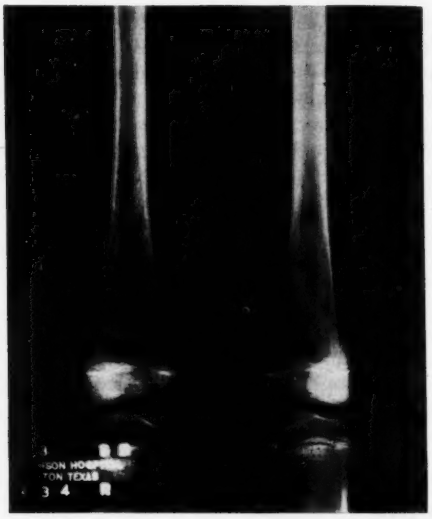

Fig. 1. "Flea-bitten" osteolytic changes in distal right femur as compared with relatively normal left femur in a 5 year old white girl with lymphosarcoma.

osteolysis may occur and pathologic fractures result.

Subperiosteal new bone formation may be seen rather frequently, more often in the larger tubular bones, less often in the ribs or phalanges, and rarely in flat bones. Extravasation from the marrow cavity or foci of the leukemic cells beneath the periosteum separates and elevates it; the periosteal osteoblasts then lay down new bone (fig. 4). Less frequently the vertical "radiating" type of spicules are encountered depending upon the mechanism of deposition of the subperiosteal new bone (fig. 5).

The transverse lines encountered in the metaphyses when less advanced are indistinguishable from those

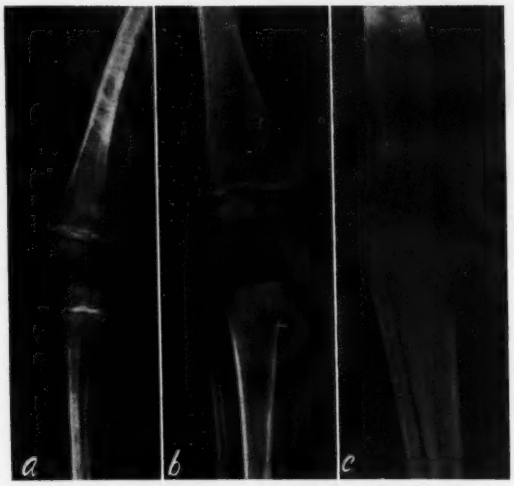

Fig. 2. a. Advanced osteolytic changes in the metaphysis of a 2 year old white mongoloid girl with acute leukemia.

b. Transverse lines of diminished density in the metaphyses in a 2½ year old white girl with acute leukemia. These changes are more advanced than those seen in most nutritional diseases.

c. The more frequent but less distinct osteolytic changes about the knee and ankle of a 6 year old white girl with acute leukemia, the corticalis and spongiosa reflecting changes.

seen in infection, nutritional disturbances, or any systemic disease interfering with growth for a period of time. However, they frequently represent the first change in leukemic disturbance in the skeleton, and earliest detection will be at sites of most rapid growth as at the knees or distal ulna and radius (figs. 2b and 6a). These changes are reversible in their less severe forms but may progress to areas of frank osteolysis.

Osteosclerosis may be seen with any or all of the other lesions. Histologically the osteoblasts are stimulated to bone production by the presence of leukemic cells with resultant heavier trabeculae, but without actual thickening of the cortex.[12] The process

Fig. 3. Osteolytic changes in the calvarium in an 8 year old white boy with lymphosarcoma. Both tables are involved, the outer to a greater extent than the inner.

may involve only a portion of one bone or the entire skeleton (figs. 2c and 6).

The importance of the skeletal examination in children with arthralgia, fever, or bone pain of undetermined origin cannot be overemphasized. Demonstration of skeletal lesions seen in leukemia will exclude most of the more commonly confused diseases such as secondary anemia, rheumatic fever, Still's disease, subacute bacterial endocarditis, sickle cell anemia, sepsis, and even poliomyelitis.

Fig. 4. Marked subperiosteal new bone in a 3 year old white boy with acute leukemia. Osteolytic changes are present in the metaphyses, a usual accompaniment.

An immediate practical application is the identification of skeletal areas accessible to needle biopsy, a procedure often necessary for diagnosis. Because of the irregular development of the sternal ossification centers, marrow aspiration is technically difficult at times, and instances of normal sternal marrow in the presence of positive biopsy findings elsewhere have been reported.

The skeletal changes in the metastatic neuroblastoma are indistinguishable from these conditions. In the past, inferential points have been used in differentiation; for example, in the presence of typical skeletal changes in a child with a mass at the upper pole of one kidney and increased intracranial pressure, the diagnosis of neuroblastoma was favored. The possible error inherent in this assumption will become apparent with the next two subjects examined.

RENAL INVOLVEMENT

Leukemic or lymphomatous infiltrations of the kidneys are commonly encountered in the pathology laboratory and may be nodular or diffuse in character. Wentzell and Berkheiser[15] reported an incidence of 53 per cent in a group of 32 patients with all types of lymphoma. Barney[2] recorded renal involvement in 18 of 23 cases of lymphoblastoma of the urinary tract, and Baldridge and Awe[1] found microscopic evidence of kidney involvement in 20 of 39 cases of lymphoma, the highest incidence occurring in the lymphocytic type with attendant leukemia. Whereas bulky single or multiple lymphomatous renal masses may occur in the adult, the diffuse type of infiltration is considerably more common in childhood and is invariably associated with acute leukemia or the leukemoid phase of a lymphoma of the lymphocytic series. It is doubtful that isolated lymphoma of the kidney as such occurs.

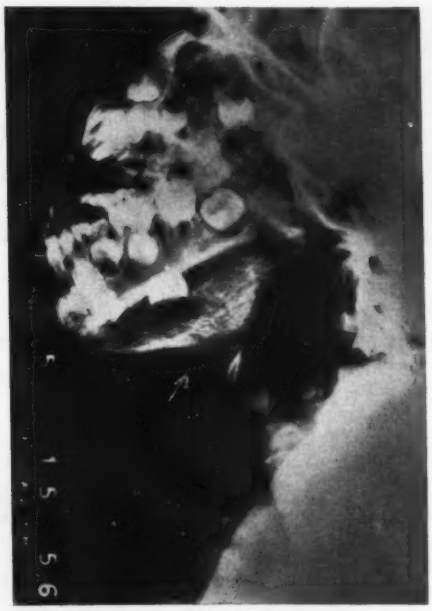

Fig. 5. "Radiating" spicules of subperiosteal new bone in the mandible of a 6 year old Negro girl with clinically proven malignant lymphoma. Histologic study of tissue from this lesion revealed infiltration of similar cells. Roentgen examination demonstrated no other skeletal lesions.

Histologically diffuse involvement is characterized by marked infiltration of the interstitial tissues by cellular masses. This is most apparent in the cortex and least evident in the peripelvic region. The glomeruli and tubules show varying degrees of separation, compression, and degeneration. Focal hemorrhage is common. Grossly the kidneys are enlarged and firm, and the individual structures lack sharp definition on cut section.

Although renal infiltration may become apparent at any time during the course of the disease, the

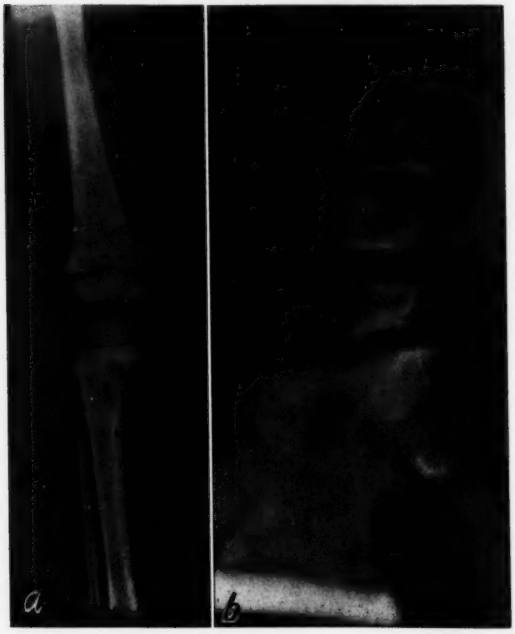

Fig. 6. a. Diffuse osteosclerosis in lower extremity in a 2 year old white girl with acute leukemia. Transverse lines are present in the distal femoral metaphysis.

b. Diffuse osteoblastic response in pelvis and lumbar spine in an 8 year old white boy with Hodgkin's disease.

autopsy incidence is not reflected by radiologic methods of examination. Smaller nodules do not significantly alter the gross architecture of the kidney, and death frequently occurs before the infiltration is detectable radiographically. However, the prolongation of life by chemotherapeutic means is resulting in a higher incidence of recognizable involvement.

Radiologically, therefore, the renal shadows are enlarged but maintain a normal outline in the majority of cases (fig. 7b). Intravenous pyelography shows separation and elongation of the calyces without evidence of individual pressure defects. Usually the appearance time and concentration of the urographic medium are excellent until the later stages of the disease when marked impairment or cessation of function becomes evident. This renal pattern may or may not show response to the various chemotherapeutic agents; progressive increase in renal size frequently can be documented (figs. 7 and 8). Invariably reduction in the size of the kidney can be obtained by irradiation, but transient interference with function may result. In 1 case we have seen heavy calcification of the parenchyma following such therapy.

Demonstration of renal lesions is not a prerequisite in the diagnosis of lymphoma or leukemia. However, several cases have been reported in which infants were referred for evaluation of abdominal masses.[6, 8, 9] In such instances the roentgen characteristics were fairly specific and the diagnosis indicated. Polycystic disease is the entity most apt to be confused. Differentiation may be achieved by noting the lack of multiple pressure defects upon the collecting system and relatively excellent function of the leukemic kidney

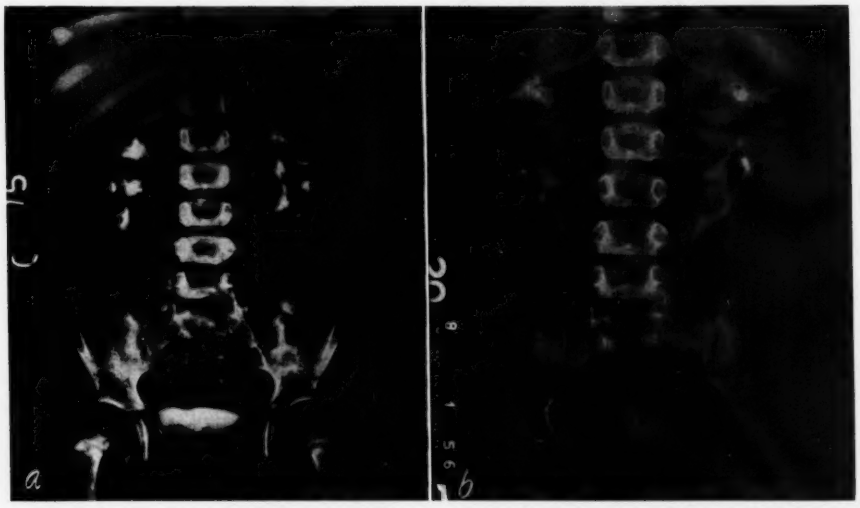

Fig. 7. a. Initial normal urogram on October 6, 1955, of a 5 year old white boy with acute leukemia. There was mediastinal adenopathy and a few palpable lymph nodes.

b. Urogram on August 1, 1956, of the same patient following chemotherapy. There is marked renal enlargement, but function is maintained. Subsequently, following a 350 r tumor dose, the kidneys decreased in size and function improved. Death 10 months later was attributed to acute right heart failure and impaired renal function.

as compared to the polycystic.[8] In the absence of renal function, perirenal air insufflation usually reveals a smooth outline in leukemia in contrast to the irregular surface of the polycystic kidney.

Frequently retroperitoneal node enlargement is present in conjunction with or independent of detectable renal disease. Death from obstruction of the urinary tract by enlarged nodes and superimposed infection is not uncommon. Retroperitoneal air is of little value in these instances, the position of the kidneys and ureters as demonstrated by pyelography being a more reliable index of retroperitoneal disease (fig. 8).

Fig. 8. a. Displacement of the right ureter by leukemic infiltration of retroperitoneal nodes in a 2½ year old white girl with acute leukemia.

b. Malignant lymphoma in an 8 year old white boy with periaortic nodes producing lateral displacement of the kidney and partial obstruction of the proximal ureters (same patient as figure 3).

INTRACRANIAL INVOLVEMENT

As in renal infiltration, autopsy studies tend to indicate intracranial leukemic infiltration is not uncommon. Schwab and Weiss[11] in 1935 reported on a collected series of 146 cases of central nervous system involvement in leukemia, 89 per cent of which had had an autopsy. Meningeal involvement was found in 17.8 per cent, cerebral invasion in 15.7 per cent, cranial nerve nuclei invasion in 15.7 per cent, and cerebral hemorrhage in 32.2 per cent. Thirty per cent of the cases showed involvement of more than one part of the nervous system. The changes are independent of the type of leukemia although there is evidence to indicate that intracranial infiltration is more frequent in the chronic form of the disease. The pathogenesis of the syndrome is not clearly understood. As in other parts of the body, there is some disagreement as to whether the leukemic cells represent a true blood-borne invasive process or proliferation of local reticulum cells.

Approximately 25 per cent of leukemic children followed at the M. D. Anderson Hospital during the past 18 months have developed symptoms related to the central nervous system. This apparently results from the prolongation of life by chemotherapy. Infiltration probably does occur in the untreated cases, but clinical manifestations are seldom encountered. Characteristically, the syndrome appears after the patient has been on chemotherapy for some months and may be in remission or relapse. The spinal fluid pressure is elevated, occasionally without symptoms, and leukemic cells are identifiable in the spinal fluid.

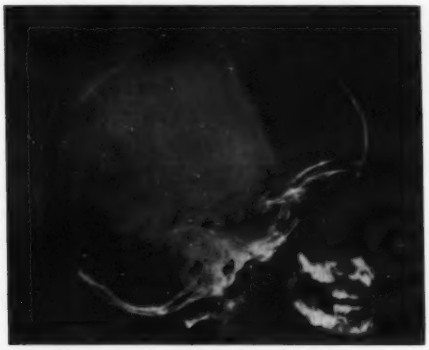

Fig. 9. Skull of a 3 year old white boy with acute leukemia and clinical nervous system syndrome. This is predominantly seen following multiple remissions from chemotherapeutic agents.

Skull films show separation of the suture lines which may be quite marked (fig. 9), frequently without associated disease in the bones of the calvarium.

The finding of cranial suture separation is of interest from the radiologic standpoint since in the past it has been the assumption that increased intracranial pressure, as manifested by an increase in width of the cranial sutures, indicated the presence of neuroblastoma rather than leukemia or lymphoma, the skeletal changes being indistinguishable. This sign was particularly relied upon if a concomitant suprarenal mass could be demonstrated. Obviously, this could be misleading since unilateral renal or adrenal infiltration can mimic a sympathicoblastoma. The failure of chemotherapeutic agents to produce satisfactory remission of intracranial disease is possibly associated with the blood-brain barrier.

SIMULTANEOUS OCCURRENCE OF MONGOLISM AND LEUKEMIA

Krivit and Good[10] recently have reported simultaneous occurrence of mongolism and leukemia in 5 children, 4 of whom were encountered over a period of 1 year. These authors have calculated the probability of both entities occurring in a child of 4 years or less as 1 in 10,000,000, which suggest some biologic relationship between the two diseases in view of their clinical experience.

The defects characteristic of mongolism occur in tissues undergoing rapid differentiation during the sixth to ninth weeks of intrauterine life. Endogenous hematopoiesis also begins during this period. It is possible that the intervention of some unknown factor during this period could be responsible for both diseases. The relationship between the virus of German measles and the incidence of congenital malformations is well known, and many studies have incriminated a filtrable agent as the cause of leukemia in mice and chickens. It is conceivable that a similar cause and effect mechanism may explain the simultaneous occurrence of mongolism and leukemia. The recent observations of Dmochowski[4] offer tentative support of this theory. He has successfully demonstrated by electron microscopy the presence of virus-like particles in the cervical lymph nodes of a 15 year old girl with acute leukemia. While possibly fortuitous, the microscopic picture is similar to that observed in the leukemic organs of mice and chickens.

As in many "rare" conditions, the actual incidence is probably higher than the literature indicates. Although only 10 cases have been reported to date, Farber[5] has observed 6 instances of coincident mongolism and leukemia and Krivit and Good[10] indicated that several other unreported cases are known to them. We have had the opportunity of studying 1 patient, a 2 year old white girl who demonstrated the classical clinical and roentgen stigmas of both diseases (fig. 10). It is probable that philosophic acceptance of intractable morbidity in the mongoloid has accounted at least in part for the paucity of case reports. The radiologist should be alert for the roentgen signs of leukemia in these children if only to provide an opportunity for further investigation of this interesting and perhaps significant relationship.

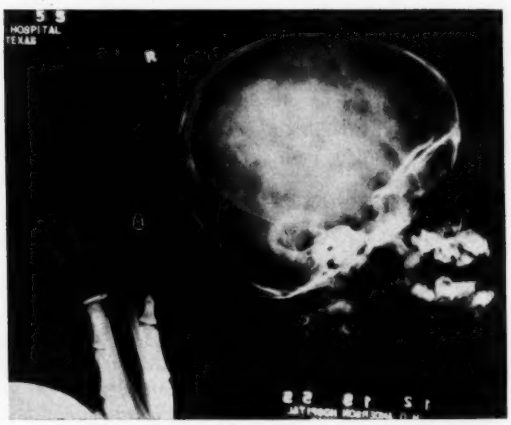

Fig. 10. Roentgenograms showing typical changes in the hand and skull of the mongoloid; early leukemic skeletal changes are present in the phalanges.

SUMMARY

The roentgen changes in the skeleton of children with lymphoma and leukemia are briefly described and are of value in differential diagnosis and selection of the site for marrow aspiration. The skeletal changes are indistinguishable from metastatic neuroblastoma.

Renal infiltration with leukemia and lymphoma is not uncommon, may be the presenting sign, and must be differentiated from polycystic kidneys.

The syndrome of central nervous system involvement is becoming more frequent with prolongation of life with chemotherapy; increased intracranial pressure is not a reliable differential point with neuroblastoma.

There is more than casual relationship between leukemia and mongolism; another case with both diseases is presented.

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ABSTRACT OF DISCUSSION

DR. DAVID H. ALLEN, Wichita Falls: The bone lesions of leukemia have been the subject of much discussion over the past 100 or more years. In 1847, only 2 years after Virchow's description of leukemia, Heschel reported an osteolytic lesion. The pathologic features of the skeletal lesions were well established before Von Jaksch's original report of the roentgen demonstration of osteosclerosis and periosteal new bone formation in 1901. This was the first reference in the medical literature to the roentgen findings. The diagnostic importance and the frequency of these lesions, however, did not receive widespread attention until 10 or 15 years ago. The importance, however, is pointed up by the fact that bone lesions probably occur in about 60 or 70 per cent of children with leukemia, so that the finding is one of no mean importance. The diagnosis of leukemia in children is frought with two problems, not so active in the adult: (1) the tendency of nonleukemic children to produce immature white blood cells in response to severe infection, that is, leukemoid response, and (2) the frequent absence of leukocytosis and immature forms in the peripheral blood of children with leukemia.

These two facts greatly enhance the value of a bone survey. Indeed, one gathers from the literature that the frequency of bone lesions in the patient without leukocytosis is even greater than in those with leukocytosis. Given a patient with fever, anemia, high sedimentation rate, leukopenia, possibly with a cardiac murmur, and with or without pain in the extremities near a joint, and possibly associated with splenomegaly or peripheral adenopathy, the demonstration of the skeletal lesions of leukemia, even though not entirely specific, may be of immeasurable aid to exclude diagnoses such as rheumatic fever, rheumatoid arthritis, sepsis, or infectious mononucleosis, or even poliomyelitis.

The following figures cited by Silverman indicate the need for a survey of all patients with this type of clinical problem rather than just those with bone or joint pain. Of the patients with bone pain, 60 per cent had demonstrable lesions, but of all patients showing lesions roentgenographically, half had pain and half were free of pain so that we must not confine our efforts to those with pain in the extremities.

There is some disagreement about the mechanism of periosteal bone formation. The generally accepted explanation is that the leukemic cells come up through the Haversian canals and elevate the periosteum; but Windholz and Foster have expressed the belief that the periosteal shell is a healing effort brought about by microscopic areas of destruction of the cortex, and they have found no sign of periosteal elevation. There is also a good deal of disagreement about the effect of Aminopterin on bone lesions. Karpinski, for one, thought that the clinical and hematologic remissions were not accompanied by radiographic regressions, but Silverman, on the other hand, reports good improvement.

All diabetics should have annual chest x-rays. Any sudden increase in insulin requirements or loss of weight, even though it appears voluntary, should be followed by a roentgenographic examination of the chest. By earlier diagnosis the prognosis of tuberculosis in the diabetic will be immeasurably improved. Treatment of both diseases must be aggressive.—Robert H. Joelson, M. D., and Henry Dolger, M. D., J. Mt. Sinai Hosp. of N. Y., July-Aug., 1956.

Importance of the Postvoiding Film In Pediatric Excretory Urography

ALEXANDER M. FINLAY, JR., M.D., M.A.C.R.

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WITH THE DISCOVERY of the roentgen ray and its effect on photographic film in 1895 the field of medicine widened rapidly. Physicians since that time, by the use of contrast media, including gas, metals, and halides, have been able to examine readily organs and their functions which heretofore had been hidden or which could be examined only by hazardous surgery. One of the organic systems which has been investigated by roentgenographic techniques is the urinary tract. In the 27 years since excretory urography was introduced[4] for general clinical use, much has been learned about congenital and acquired uropathy. Techniques for better visualization of the urinary tract, including new contrast media (Diodrast, Hypaque, Renografin, Miokon); drugs to cause better absorption of the contrast media (Wydase and other hyaluronidase drugs); and the administration of fluids, carbonated or otherwise, have been investigated at length.

Dr. Alexander M. Finlay, Jr., Denton radiologist, presented this paper for the Section on Radiology of the Texas Medical Association April 29, 1957, in Dallas.

Much too infrequently excretory urography and studies on the urinary tract are performed on patients with fevers of unknown origin that respond readily to various types of antibiotic therapy. Postvoiding films in such cases may show definite early urinary retention and minimal bladder trabeculation. No longer than 2 minutes should elapse between voiding and obtaining the postvoiding film.

INDICATIONS

Campbell[5] stated that excretory urography is indicated in any case in which visualization of the urinary tract is desired. This includes chronic pyuria; hematuria not due to nephritis; tumor or pain along the upper urinary tract; congenital anomalies; and disturbances of urination not falling in the above groupings, including enuresis. It is especially indicated in cases in which ureteral catheterization or cystoscopy is impossible. It has been recommended by pediatricians in the investigation of vague abdominal pain and fevers of unknown origin. Wyatt[12] stated that "Pyuria, pain, and hematuria are classical signs of urinary tract infection. These are frequently accompanied by fever, dysuria, enuresis, vomiting, diarrhea, and other systemic manifestations. Urinary tract infection is an indication for excretory urography with one possible exception, namely, a single acute attack of pyuria in a female child, with prompt response to therapy. Such infection in a male child should be thoroughly investigated because, although less common than in the female, it is more often associated with congenital malformations."

Contraindications to excretory urography are (1) marked renal insufficiency, (2) impaired hepatic function, (3) active pulmonary tuberculosis, (4) idiosyncrasy to the drug used, and (5) advanced nephrosis.

TECHNIQUE

Preparation of the patient has been ably covered by various authors.[1, 2, 5, 12] In the younger children (6 months to 5 years) dehydration is difficult to achieve. Visualization has not been a great problem in this age group when the drug can be administered intravenously. When intramuscular injection must be performed, the sites of injection are prepared by injecting 0.5 cc. of a mixture of procaine and hyaluronidase after the method of Gladinkoff and Jacobsson.[7] The use of fluids, either carbonated or noncarbonated, has been found advantageous when small bowel gas has been a problem.[1, 2, 8] The amount of Diodrast used varies with the size of the patient and the method used. In most cases the amounts indicated in the literature accompanying the solution have been administered without untoward reaction and with satisfactory results. Films are obtained with the patient in a supine position. Time intervals have varied slightly; for the most part exposures are made at 5, 10, 15, and 20 minute intervals following intravenous injection. After intramuscular injection, films are obtained at 5, 10, 20, and 30 minute intervals following injection. The patient is then allowed to leave the x-ray diagnostic room but remains in the department or in the immediate vicinity until he urinates, at which time another film is obtained over the bladder area with the patient upright. The time interval between the end of micturition and the obtaining of the film is critical and should not be longer than 2 minutes. By waiting for the normal desire for mic-

Fig. 1. a. Case 1. The urinary bladder and upper excretory urinary tract are well demonstrated in the roentgenogram.

b. Only a small amount of opacified urine remains in the bladder following voiding.

turition rather than forcing the child to void at a given time, a more accurate estimation of the urinary bladder retention is accomplished.

Campbell[5] stated that "various combinations of urinary obstruction and infection constitute over 90 per cent of the major urologic problems in children." Brodny and Robins[3] found evidence of bladder-neck and/or subvesical obstruction as an organic cause of enuresis in almost 25 per cent of all cases of enuresis examined. They stated that cystograms, properly interpreted, frequently show changes in the vesical outline sufficient to establish a diagnosis without further instruction.

CASE REPORTS

CASE 1.—S. K. I., a 6 year old white girl, was seen by her family doctor for fever of unknown origin. Urinalysis (catheterized specimen) showed many white blood cells, many red blood cells, and epithelial cells. An excretory urogram was interpreted as normal. The upper excretory urinary tract was well visualized, and the urinary bladder seemed adequately filled (fig. 1a). A postvoiding film showed only a small amount of dye in the bladder (fig. 1b). Cystoscopy was performed and a very mild cystitis was described. The patient's cystitis cleared rapidly on chemotherapy.

CASE 2.—M. Y., a 9 year old white boy, was seen by his physician following an episode of pyuria and hematuria. Past history, obtained from the child's mother, indicated that the child was healthy until the age of 2½ years, when he began to have frequent upper respiratory infections. These would clear readily on the administration of antibiotics, only to recur about every 2½ months. Blood counts taken over this period of time showed usually mild to moderate elevation of the white blood count. No urinalysis was recorded.

When the patient was 5 years of age, because of frequent episodes, a tonsillectomy was performed. The upper respiratory infections continued unabated, characterized mainly by fever.

At 7 years, the patient was seen by his physician for fever, abdominal pain, cramping, and vomiting. A complete blood count showed normal red blood count and hemoglobin, with 17,500 white blood cells and a left shift. No urinalysis was recorded. A diagnosis of acute appendicitis was made, and an appendectomy was performed. No pathologic report was available on the hospital chart.

Following uneventful recovery from the operation, the child continued to have frequent fevers of unknown origin which responded to antibiotic therapy. The child seemed normally active, had no difficulty in school, but was small for his age.

The night prior to admission to the hospital, he complained of nausea and fever. During the night his mother awakened to find the boy in the bathroom attempting to

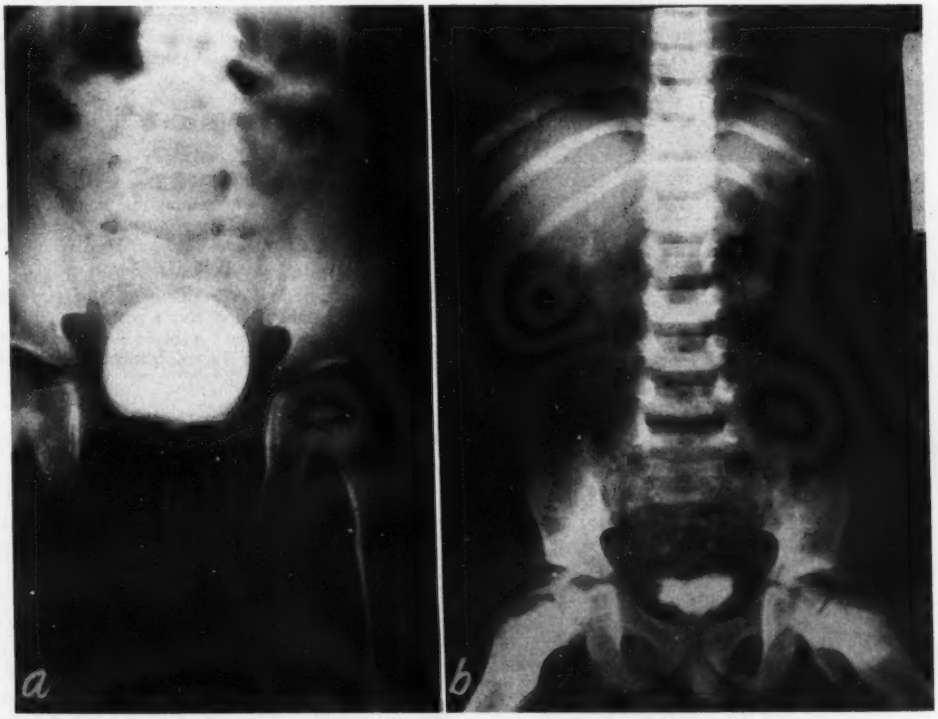

Fig. 2. a. Case 4. The urinary bladder is distended, and no trabeculation can be diagnosed from the roentgenogram.

b. The urinary bladder has a bizarre outline, and there is evidence of abnormal urinary retention after voiding.

urinate. She stated that small amounts of "blood and pus" were noted on the commode bowl.

An excretory urogram revealed rather marked ectasia of the right side of the renal pelvis and calyceal structures. Early changes were suspected on the left. A diagnosis of obstruction of the urinary-pelvic junction on the right was made. The postvoiding film was very suggestive of abnormal urinary retention. The patient was subjected to a plastic procedure on the right kidney and withstood the operation well. Since that time (1 year ago) the patient has gained over 2 inches in height and 20 pounds in weight. No further fevers of unknown origin have occurred.

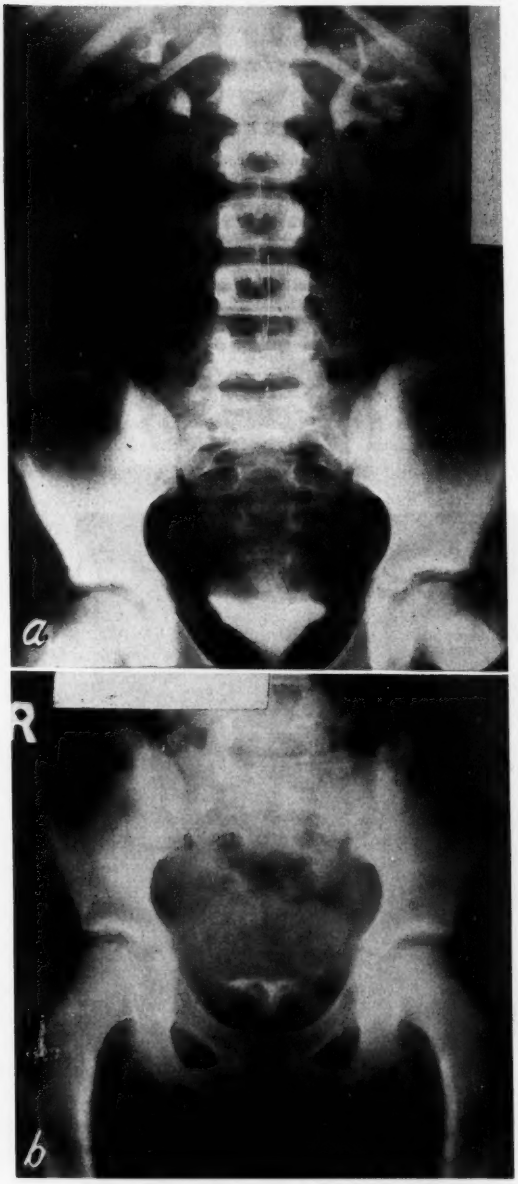

Fig. 3. a. Case 5. The bladder neck and base of the bladder are contracted, and the presence of trabeculation is noted on the roentgenogram.

b. Abnormal retention, trabeculation, and edema of the bladder mucosa are seen on the postvoiding film.

CASE 3.—R. S., a 2 year old white boy, was brought to his family doctor because of a large painful mass in the midline of the lower part of the abdomen. The parents had noted the mass for several days and said it was enlarging. Roentgenograms of the abdomen revealed the space occupying mass and suggested that it might be bladder. The patient was then subjected to catheterization; 750 cc. of urine was drawn off and the mass disappeared. An excretory urogram showed no abnormality of the upper urinary tract, but there was some trabeculation of the bladder. A postvoiding film taken 3½ hours later showed no urinary retention. It was then found that a catheter had been passed twice and the bladder irrigated just prior to the postvoiding film. Following cystoscopy, a postvoiding film revealed marked urinary retention. A subvesical obstruction was diagnosed, and a plastic procedure was performed. No follow-up films have been obtained yet.

CASE 4.—H. W., a 4 year old white boy, was seen by his physician for frequency and enuresis. Urinalysis revealed many white and red blood cells. An excretory urogram showed no abnormality of the upper urinary tract, and the filled bladder outline was not unusual (fig. 2a). A postvoiding film, however, suggested abnormal urinary retention (fig. 2b), which was confirmed by catheterization and cystoscopy. A bladder-neck obstruction was treated and relieved.

CASE 5.—S. R., an 8 year old white girl, was seen by her local doctor because of frequency, fever, and abdominal pain. Urinalysis revealed marked pyuria, and an excretory urogram showed no definite abnormality of the upper urinary tract. The bladder, however, showed marked trabeculation and distortion, with narrowing of the floor of the bladder (fig. 3a). A postvoiding film showed abnormal urinary retention and a bizarre outline (fig. 3b). Cystoscopy revealed a severe cystitis, marked edema of the walls of the bladder, and hypertrophic changes in the mucosa of the bladder neck. Transurethral resection of some of the hypertrophic mucosa was performed following control of the infection, and the condition has been relieved.

CASE 6.—D. E., a 6 year old white boy, was examined because of enuresis. An excretory urogram revealed moderate bladder trabeculation and a postvoiding film showed marked urinary retention. A bladder-neck obstruction was diagnosed by cystoscopy and the patient treated by dilation.

CONCLUSIONS

Whereas excretory urography never should be relied upon solely, the fact that the examination is frequently more readily available in the outlying areas than is adequate cystoscopic examination makes it a very useful procedure. Abnormal findings should be confirmed by cystoscopy and retrograde pyelography as well as other means. The addition of the postvoiding film to the usual excretory urogram allows the examiner to glean additional information as to function of the urinary system. On occasion the only suggestion of abnormality will be found on this film, so frequently omitted. Strict attention to the time

interval between voiding and obtaining the post-voiding film is a necessity, since too long an interval obviously will present false results.

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CASE REPORTS

Meckel's Diverticulum

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THE COINCIDENTAL existence of Meckel's diverticulum is given as approximately 1 to 2 per cent in various autopsy series, but that its presence is of importance only when complications arise is noted from several series which give the incidence of primary pathology causing surgical interference to run about 1 case per 1,000, a much lower incidence than that noted at necropsy. Obviously many diverticula are present and remain undiscovered during intra-abdominal procedures. Perhaps we should be more diligent in looking for coincidental Meckel's diverticula at the time of routine abdominal exploration for other reasons, which might prevent complications from arising later in such persons. Certainly a review of the literature shows that when such complications do occur the morbidity and mortality are of great seriousness.

Dr. Ted Lace, Fort Worth surgeon, presented this paper for the Texas Surgical Society April 2, 1957, in Dallas.

Three cases, each illustrating a different approach to the subject of Meckel's diverticulum, are presented. Such surgical problems as bleeding in infants and children, intussusception, and intestinal obstruction are covered in general, as are embryology and anatomy. The author suggests that surgeons should look for coincidental Meckel's diverticula when routine abdominal exploration for other reasons is done.

Complications of Meckel's diverticulum are inflammation or perforation with peritonitis, hemorrhage, volvulus with obstruction, intussusception, and many lesser occurring complications varying from intra-abdominal perforation with meconium peritonitis to carcinoma. I have not seen the usual medical school complication of inflammation simulating appendicitis. Actually, perforation is not a frequent condition. Bernatz[1] reported in staff meetings of Mayo Clinic a series from literature of 26 cases in 1955. Fish bones were the etiologic agents in 16 cases of the 26 noted. The remaining cases were those of advanced primary inflammatory state with gangrene or from peptic ulceration and perforation. Meckel's diverticulum is usually anatomically a wide mouth structure with an adequate arterial supply of its own, and with much less likelihood of a process developing as is so often seen in the appendix with intraluminal calculus with secondary necrosis.

I have seen 3 cases in the last 3 years, each of which illustrates a different approach. I will also discuss the types of surgical problems in general, namely, bleeding in infants and children, intussusception, and intestinal obstruction.

CASE REPORTS

CASE 1.—A 4 month old boy was first seen in July, 1953, by his attending pediatrician with the history of onset of vague abdominal discomfort which grew worse to the point that at about 10 p. m. the parents gave the baby an enema, and on evacuation they noted a tremendous amount of blood.

There was an absence of any previous bleeding, blood dyscrasias, or history of organic disease. The child had been allergic to milk and had been fed a soy bean mixture. A diagnosis of possible rupture of a vessel in Meckel's diverticulum was noted along with the other possibilities of polyp with erosion or rupture of a hemangioma. Recovery was rapid with transfusion and the child was sent home, to be readmitted in November with the same complaint. Examination was again negative except for a tremendous amount of rectal bleeding of bright blood. The child was put on a low residue diet and antibiotics; bleeding quickly ceased and he was discharged again for observation. Hemoglobin on the second admission was 13.3 Gm. per 100 cc. with a red blood count of 4,020,000 per cubic centimeter, which were about the same findings as on the first admission.

The third admission was 2 days later and after another hemorrhage, admitting count on this occasion being 9.5 Gm. per 100 cc. with 2,800,000 red cells. At this time a gastroenterologist and I were asked for consultation. We agreed on conservative management as long as possible, because of the well known fact, stressed by Gross,[3] that laparotomy in a considerable number of cases of undiagnosed intestinal bleeding fails to reveal the source. Gross[3] stated, "in dealing with children of rectal bleeding of obscure origin it is sometimes exceedingly difficult for even the most experienced physician or surgeon to decide—in an honest and objective manner—whether to operate or not." This was my belief in this child, since he had ceased bleeding on two previous occasions; also I recommended that interval examination be done, particularly proctoscopic examination under anesthesia for a possible polyp.

During this admission a barium enema study was done with no findings of disease. A gastrointestinal series also was negative for evidence of Meckel's diverticulum. Gross[3] has said that he does not try to demonstrate Meckel's diverticulum by roentgen ray, as it is almost never demonstrable. However, Lovelace and his associates[4] reported in 1950 a case of hemorrhage from Meckel's diverticulum in which a diverticulum was demonstrated roentgenographically, by using a method of forcing barium past the ileocecal valve with moderate pressure from a raised enema can and using to introduce the barium a number 18 Bardex type balloon catheter inserted into the rectum with the balloon distended at a high level.

This patient was admitted again November 29, 1953, with another hemorrhage. At this time I was ready for surgical exploration in spite of what seemed to be an unsatisfactory proctoscopic examination having been done. However, a virus pneumonitis was quickly noted and the exploratory surgery delayed. Fortunately, after this postponement, the child was studied proctoscopically with what I thought adequate elimination of rectal polyp as a diagnosis.

The child was hospitalized again March 15, 1954, for elective surgical exploration. Preoperative diagnosis was "past rectal hemorrhage with probable Meckel's diverticulum." Exploration was done through a right paramedian incision. The cecum was found completely unattached and in the left side, rather than in the right lower quadrant from which point it had been hoped to start exploration of the ileum. By beginning at the cecum and tracing the ileum, a Meckel's diverticulum was finally found at an unusually high position on the ileum, estimated at proximal to its midlength. The diverticulum had a broad base and was slightly eccentric on the antimesenteric border of the ileum. The diverticulum measured approximately 1.25 cm. at its base and about 2 cm. in length and with a very thick wall which precluded a simple excision after clamping of the base. The diverticulum was excised with a wedge type incision, saving approximately one-fourth of the circumference of the ileum intact at its mesentery border. After this open excision, a large single vessel was noted in a subserous position supplying an area of ulceration in the mucosa of the diverticulum. The defect was closed with an ordinary two row technique, the first with 3-0 intestinal atraumatic chromic suture inverting the mucosa with an in and out loop suture, and the second of interrupted 3-0 silk. The previously noted large artery was securely ligated and the abdomen closed in layers without drainage.

Pathologic finding was that of a Meckel's diverticulum containing gastric mucosa with an area of subacute peptic ulceration. Recovery was rapid and the child has remained well.

Freedman,[2] in a review of 21 cases of diverticula causing bleeding, noted that 9 of the patients were less than 1 year of age and 16 were boys. Gross blood was the chief symptom in all cases and varied from large quantities of bright red blood containing clots or currant jelly material to the passage of tarry stools. Bright red blood was mixed with feces in only 4 cases. Bleeding was silent in 12 of the 21 cases but associated with colicky pain of variable severity in 9 remaining. This pain was usually located about the umbilicus or on the right side of the abdomen.

Gross' series[3] of 149 patients for whom diverticulectomy was performed listed hemorrhage as the chief symptom in 50 or an incident of one-third, with 80 per cent of the patients less than 2 years of age. The principal alarming symptom was the sudden passage of a bloody stool in a young child who had had no previous symptoms. He noted that although the first stool might be dark or black in color, subsequent ones were invariably bright red, as was a constant finding in this case. The massiveness of bleeding is in contrast to the spotting of blood occurring with anal fissures or rectal polyps. Also absent in this patient, as in typical series, was the agonizing pain which accompanies the bleeding of intussusception. Intussusception from Meckel's diverticulum, on the basis of statistics, is much more often a condition of older children.

Gross[3] noted in a later series during 1950 an occurrence of Meckel's diverticulum in 3 of the 65 patients admitted to the hospital because of rectal bleeding of undetermined origin. Benign polyp of the rectum accounted for 11 cases, proctitis and fissure for 6, with gastritis or enteritis, ulcerative colitis, duodenal ulcer, intestinal duplication, and particularly systemic hemorrhagic disease and hemorrhagic disease of the newborn accounting for 27, leaving as gastrointestinal bleeding of unknown etiology 18 cases of the total 65. The 18 patients who were discharged with a diagnosis of rectal bleeding of unknown etiology did well as a group, 2 continuing to have rectal bleeding for a considerable length of time, 1 developing prolapse of the rectum, a fourth dying of a coincidental illness, the remaining 14 having no further difficulty.

In reviewing this case today I feel that surgical interference might have been resorted to more

promptly. However, on most of the occasions the hemorrhage was not at the point of being "bled out," and with each incident of cessation, the overanxious parents were more than glad to defer surgical exploration. One postponement resulted from the coincidental virus infection.

CASE 2.—A 9 year old girl was admitted on September 26, 1955, with a history of vomiting for 24 hours and abdominal pain for 18 hours. The pain was noted to be cyclic and increasing in intensity, and following the peaks the patient vomited. There was no blood in the vomitus. There was no history of diarrhea or constipation. The appetite had been good; the bowels had moved normally on the day prior; and no history was given of bloody stool, currant jelly stools, or the like. The following morning the patient had a rectal temperature of 102 F. and was so under sedation that interview was impossible. The peaks of pain described on the admission note were not present, probably from oversedation. The salient finding was an abdominal mass of considerable size, estimated at about 10 cm. in diameter and having the rounded general feel of a cyst. The mass was quite movable. It definitely was out of the pelvis but possibly could have been an ovarian cyst. Rectal examination showed no blood on the examining finger. Mesenteric cyst and reduplication of the intestinal tract with submucosal or intramural hemorrhage were noted as possibilities. Meckel's diverticulum was a likely diagnosis with possibly an obstructing band or omphalocele present. Intussusception, ovarian cyst with twisted pedicle, intestinal reduplication, and so forth, were also possible diagnoses.

Exploration was done as advised through a right paramedian incision, and a large mass of ileoileal intussusception delivered through the abdominal incision. Exploration revealed extreme gangrene of the intussuscepted loop and irreducibility even had the bowel been viable, which it was not. The mass was resected, ligating the mesentery with a chromic-O ligature and doing an end to end anastomosis of normal bowel. An adequate stoma was obtained with a two layer technique suture. Water, 150 cc., with 1.5 Gm. of neomycin was left in the abdominal cavity, which was closed without drainage. Pathologic diagnosis was that of intussusception of the small intestine with hemorrhage, necrosis, and acute inflammation. An invaginated Meckel's diverticulum at the head of the intussusceptum loop was found. Recovery of the patient was rapid and without event.

Noting a wide difference between the classical type of acute intussusception and that initiated by Meckel's diverticulum, Harkins[5] reported an exhaustive survey of all cases of Meckel's diverticulum type of intussusception in the English language literature up to 1933. This was followed by a second review from 1933 to 1951 by Holowach, Thurston, and McCoy,[6] with additional cases seen at St. Louis Children's Hospital. This second review was done from the same approach as Harkins' series,[5] and the similarity in statistics is amazing with the exception of the drop in mortality from 41 per cent to 2.8 per cent because of improved diagnosis, better operative procedure, and, of course, better preoperative and postoperative care.

In a brief analysis of both the series of Harkins[5] and the St. Louis Children's Hospital review, one notes that whereas the majority, 80 per cent or more, of acute intussusceptions occur before the patient is 2 years of age, those associated with Meckel's diverticulum are conditions of older children or adults, 94.2 per cent in the second series. The appearance of shock or apathy, so characteristic of acute intussusception, was seldom noted in the older patient. Both series showed that abdominal mass is much less constantly found in intussusceptions due to Meckel's diverticulum, although this certainly is not true in the case presented. Actually, in the case reported the mass was of such large size as to cause confusion. There is also noted, as in my case, typical absence of melena in intussusception with Meckel's diverticulum, partially attributed to the tamponade effect of the intraluminal diverticulum, and also in an undetermined manner to the older age of the affected patients.

Also half the patients in both series had a past history of similar abdominal complaints, not found in my case, but it is worth mentioning in stressing chronicity of symptoms of Meckel's diverticulum in obstruction. In contradistinction to the usual intussusception, the majority of Meckel's cases were ileoileal, probably because of the barrier of the ileocecal valve to the added bulk of the space-taking Meckel's diverticulum. I believe resection is much more often necessary in cases of Meckel's intussusception, gangrene being a much more rapid process. This latter observation, that is, rapid necrosis, however, is hard to understand or correlate with the infrequency of melena, but the St. Louis series showed melena present in only 17 cases of 116 cases reviewed, in contradistinction of melena in 80 per cent of all cases of intussusception.

The third case is more of a curiosity but is also a beginning point from which to discuss briefly anatomy and embryology of Meckel's diverticulum.

CASE 3.—A 29 year old man was admitted to the emergency room with a 12 hour history of acute abdominal epigastric pain. The pain was described as sharp, stabbing, and constant, radiating to the midline of the chest. There had been nausea and vomiting for 1 day but without blood in the vomitus. The patient gave a history of a previous episode in 1942, undiagnosed at that time. Past history was otherwise irrelevant except that appendectomy had been performed in childhood. Examination noted a well developed, well nourished man in acute distress. Blood pressure was 135/75; temperature, pulse, and respiration were normal. The abdominal findings were apparent exquisite pain and tenderness, but without boardlike rigidity, although muscle guarding was considerable. The intern's diagnosis on admission of the patient was acute gastritis.

The day after admission the patient had more obvious signs of obstruction. Temperature was 101.6 F. with the pulse rate becoming elevated to 100 pulsations per minute. The abdomen was exquisitely tender; peristalsis was moderate. No masses were determined. Scout film of the abdomen had not been made. My diagnosis was typical closed loop obstruction, and immediate surgery was recommended and performed.

Exploration of the abdomen was done through a right rectus muscle splitting incision with immediate visualization of what was the worst Chinese puzzle type of intestinal disease I have ever encountered. Gangrenous loops of bowel

seemed to be going in all directions, without a starting point for tracing. There was a multitude of adhesions in the lower third of the ileum to the undersurface of an old McBurney scar. Distal to this point the ileum was moderately necrotic from obstruction, with distention; and a loop was traced upwards to a point where a Meckel's diverticulum, originating from a lower loop of ileum, ran over and was continuous and patent with an omphalomesenteric cyst at the umbilicus. This Meckel's diverticulum, with an attachment at the umbilicus, formed one point of obstruction, and the adhesion of a more proximal loop of bowel to the right of McBurney's scar formed another point of obstruction. Between these two points a rather long loop of ileum in a figure of eight type of placement was gangrenous and widely distended. Proximal to this figure of eight loop was normal ileum, except that it was distended from obstruction.

While I was trying to find a starting point, the gangrenous elongation of the tense Meckel's diverticulum was accidentally and probably fortunately pulled in two, with, however, a large spillage of intestinal content, including previously eaten fresh corn. Clamps were placed on either end of this parted diverticulum; the loop was then untwisted and unraveled to a more proximal part of ileum, at which point it was densely adhered and extremely gangrenous at its attachment to the undersurface of the old McBurney incision.

At this point the ileum also parted with another intestinal spillage. This rip in the ileum was sutured with an inverting row of chromic suture and a second row of 3-0 atraumatic intestinal silk. The Meckel's diverticulum was then excised, clamping across the base and suturing the base with continuous chromic 3-0 intestinal sutures, continuing back again, and incorporating serosa in a second row. The distal end of the Meckel's diverticulum was then dissected along with its continuation to the underside of the umbilicus. It was thought that the involved bowel was viable to the point of sustaining life, the abdomen being closed in layers without drainage, but using stainless steel tension suture and incorporating all layers of the abdominal wall except the peritoneal suture line.

Pathologic diagnosis of the specimen removed was Meckel's diverticulum showing extensive acute and chronic diverticulitis and ulceration. Gastric mucosa was also noted in a portion of the lining. Total recovery followed, complicated only by an abdominal wall abscess which responded to simple drainage.

EMBRYOLOGY AND ANATOMY

Any vestige of the omphalomesenteric duct originally connecting the yolk sac to the primitive midgut may remain, varying from true Meckel's diverticulum, vestigial bands to the umbilicus, patent ducts, omphalomesenteric cyst, or umbilical sinuses, which may be true fecal fistulas. Meckel's diverticulum should fulfill the criteria of being antimesenteric, from the ileum, having its own blood supply, and containing all layers of bowel. Heterotopic tissue in Meckel's diverticulum occurs in 15 to 20 per cent of cases, rising to a 70 to 75 per cent incidence in symptom-producing cases of Meckel's diverticulum. Gastric mucosa is the more common, followed by duodenal mucosa, pancreatic tissue, colonic mucosa, or varied combinations of them. In this particular case the diverticulum continued as a sinus and omphalomesenteric cyst completely patent to the undersurface of the umbilicus, the skin of the umbilicus only preventing a fecal fistula.

Case 3 also shows Meckel's diverticulum as a cause of chronic intestinal obstruction. Meckel's diverticulum has proved to be the underlying cause of obstruction in from 2.6 per cent up to 6 per cent in various series. In adults intestinal obstruction is the most frequent complication produced by diverticulum. Obstruction may be by invagination of a diverticulum into the ileum with chronic obstruction occurring.

Of course we have seen before how it acts as a lead in intussusception. Chronic forms of small bowel obstruction are also noted increasingly, invagination persisting for long periods of time with a picture of chronic or low grade obstruction. Towbin[7] presented 41 cases of obstruction due to Meckel's diverticulum reviewed by Hertzler and Gibson, 9 of the 41 patients suffering many repeated attacks of obstruction and in 1 case monthly episodes recurring over a period of 5 years. Our 29 year old man (case 3) gave a history of a definite similar episode occurring previously and, on later questioning, a history of a vague type of digestive disturbance, pointing out that foods many times had caused cramps and vague abdominal discomfort but never in a definite pattern.

SUMMARY

Three types of cases in which Meckel's diverticulum was the primary condition in surgical cases have been presented. The problem of bleeding in children, intussusception, and intestinal obstruction have been approached by means of these 3 cases, along with a brief discussion of embryology and anatomy. Difficulty in diagnosis of Meckel's diverticulum preoperatively had been noted, with the constant reminder that it may be present as causative agent in cases of abdominal perplexity. Meckel's diverticulum also should be remembered as a chronic cause of partial or recurring intestinal obstruction.

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Simple Ulcer Of the Colon

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NONSPECIFIC, simple ulceration of the large bowel is a rare condition of unknown cause; its importance lies in the seriousness of its clinical course. The associated mortality rate, still unacceptably high, is related to the tendency of the lesion to perforate. Characteristically, it masquerades as one of the more common serious abdominal conditions and

Dr. Edwin M. Sykes presented this paper before the Texas Surgical Society when that group met in Dallas April 1 and 2, 1957.

Diagnosis of simple ulcer of the colon is extremely difficult because symptoms are confused with those of more common conditions such as appendicitis and carcinoma. Three case reports are given, and surgical treatment is discussed.

it has practically never been correctly diagnosed prior to laparotomy or autopsy. Even at laparotomy, it usually is confused with other more common colonic lesions, particularly carcinoma. The rarity and seriousness of the condition, combined with the difficulties in making the diagnosis, justify the following case reports.

CASE REPORTS

CASE 1.—N. L., a 45 year old white woman, was admitted to a hospital May 22, 1954, complaining of abdominal cramping pain of acute onset for 2 days, and the passage of several red, bloody stools for 1 day. The pain had shifted to the right lower quadrant prior to admission. No nausea or vomiting was present. An appendectomy had been performed in the past. Physical examination revealed moderate tenderness in the region of McBurney's point and dark red blood on the examining finger following rectal examination. Anoscopy and sigmoidoscopy were negative. Complete blood count and urinalysis examinations were within normal limits. Stool examination was negative for ova and parasites. The patient was placed on medical regimen consisting of bland diet, atropine, streptomycin intramuscularly, and oxytetracycline orally. The bleeding soon ceased and the right lower quadrant pain quickly improved but never disappeared. Roentgenographic study of the colon with barium enema revealed an irregularity at the junction of cecum and ascending colon. A diagnosis of carcinoma of the cecum was made and the patient was transferred to Santa Rosa Hospital for surgery, which was done June 2.

On the anterior wall of the cecum and lower ascending colon, and not adherent to any adjacent structure, was a broad, indurated, plaque-like thickening of the bowel, measuring 5 by 4 cm. The serosa over this area was granular and faintly hyperemic. The lesion was located on the level of the ileocecal junction. The remaining parts of the large and small bowel were normal to inspection and palpation. The appendix was absent. No regional lymph node enlargement or evidence of hepatic metastasis was present. A right hemicolectomy was performed.

The post operative course was complicated by wound infection, and 2½ years later by an incisional hernia, which was repaired.

Pathologic examination revealed a large, subacute, nonspecific, solitary ulceration of the colon, measuring 4 cm. in diameter. The ulceration extended to the muscularis propria. No vascular lesions of a primary nature were found.

This experience stimulated a search for similar cases in San Antonio hospitals. Two cases occurring during the past 5 years were found in which the lesion was proven by pathologic examination to be benign and nonspecific.

CASE 2.—M. R., a 25 year old white woman, was admitted to the hospital June 6, 1956, with abdominal pain and nausea of 3 days' duration. Physical examination revealed tenderness in the right lower quadrant and temperature of 99.4 F. The white blood count was 15,900 per cubic centimeter with 95 per cent polymorphonuclear leukocytes. A preoperative diagnosis of acute appendicitis was made, but at laparotomy, performed the day of admission, the appendix was found to be normal. An indurated inflamed mass was noted on the anterior wall of the ascending colon 2 to 3 cm. from the appendiceal base and just above the level of the ileocecal valve. Dissection over this mass revealed that perforation of the colon had occurred, the site of perforation being walled off solely by adjacent appendices epiploicae. The perforating lesion was excised and the colon closed in layers. Appendectomy was performed and a tube placed through the appendiceal ostium and into the terminal ileum. The tube was brought out through the abdominal wall, and the cecum was sutured to the parietal peritoneum. The postoperative course was uneventful.

Pathologic examination of the specimen showed marked, acute, nonspecific inflammation with ulceration of the cecum. The appendix was normal.

CASE 3.—G. P., a Negro woman, age 51, was admitted August 10, 1953, with a diagnosis of partially obstructing carcinoma of the sigmoid colon. The patient had had alternating diarrhea and constipation with an occasional bloody stool for the preceding 4 months. There was tenderness over the area of the descending colon. Barium enema revealed a constricting lesion of the sigmoid; no diverticula were noted; and the rest of the colon was normal to roentgenographic examination.

At surgery on August 11, the lower descending colon and adjacent sigmoid colon were noted to be thickened, indurated, and inflamed for 4 inches. One similar area was felt to be present in the region of the cecum and another in the transverse colon. The obstructing lesion in the sigmoid was felt to be an inflammatory lesion and resection was performed with end-to-end anastomosis. Appendectomy and cecostomy also were performed. The postoperative course was uneventful.

Pathologic examination revealed a solitary ulceration 4.5 cm. long and completely encircling the colon except for an 11 mm. gap of normal mucosa. The base of the ulceration was bright red and granular. Definite constriction and narrowing at the level of the ulcer was noted. The surrounding mucosa was normal. Microscopically, a nonspecific ulcer was found: the wall was several times its normal thickness, and granulation tissue replaced submucosa. Considerable subserosal edema was noted.

DISCUSSION

The diagnosis of simple, nonspecific ulcer of the large bowel rests upon the exclusion of other more common inflammatory diseases, such as the chronic granulomas of tuberculosis and actinomycosis, diverticulitis, amebic granuloma, the multiple superficial ulcerations of acute bacillary colitis, idiopathic chronic ulcerative colitis of either the segmental or universal type, and bowel ulceration secondary to intussusception, volvulus, and mesenteric vascular occlusion. Such exclusions are not always clearly demonstrable. There are two uncommon and poorly understood conditions, idiopathic gangrene of the cecum and so-called primary phlegmonous cecitis, which are generally differentiated from simple ulcer of the large bowel; however, these latter three conditions, each of unknown etiology, may represent differing manifestations of the same basic abnormality. It appears from a close study of reported cases that simple ulceration, localized gangrene, and phlegmonous thickening of the surrounding bowel wall can coexist.

In 1941, Barlow[1] collected and analyzed 80 cases of simple ulcer of the large bowel reported up to that time. Since that time 23 more cases have been found. Reported cases, therefore, now number in the neighborhood of 100.

In the series reviewed in 1939 by Cameron,[3] whose primary interest was in the cecum, the over-all mortality was 57 per cent; none of the patients in that series survived without surgery; the surgical mortality rate was 40 per cent; and in the entire group approximately 75 per cent of the patients had suffered perforation of the colon when first seen. Since 1941, refinements in colon surgery and the development of modern surgical adjuncts, especially antibiotics, have improved this grim picture somewhat. An analysis of the 23 more recently reported cases, to which are added the 3 cases reported herein, reveals that in the past 16 years there have been 5 deaths among the 24 cases in which the outcome was given. In 3 of the deaths, the diagnosis had been missed during life and was made at autopsy; 2 deaths followed surgical efforts directed toward the ulcer itself.

The tremendous difficulties in making a correct diagnosis are demonstrated in the fact that, with 2 exceptions, the correct diagnosis has not been made prior to laparotomy or to autopsy.[2, 9] In the majority of instances the disease simulates either acute appendicitis or carcinoma of the cecum or colon. In fact, many of the cases were confused with both of these conditions, the patient being operated upon initially for acute appendicitis and a lesion then being found which was thought to be carcinoma of the right colon or cecum. The frequency with which a preoperative diagnosis of acute appendicitis is made is understandable when it is recognized, first of all, that approximately 50 per cent of all simple ulcers of the large bowel occur in the cecum or ascending colon[1] and, second, that the vast majority of the cases are acute in their onset. It is the unusual situation to have symptoms persisting for several months as in case 3. Among the 25 cases reported since 1941 in which surgery was done, 11 patients were operated upon with an initial diagnosis of appendicitis; in these cases, after the peritoneal cavity had been opened, the cecal or colonic lesion was diagnosed on gross pathologic grounds as carcinoma in 7 cases. The lesion was examined at laparotomy and an opinion expressed as to the gross pathologic diagnosis in a total of 19 cases; in 11 the lesion was thought to be malignant.

It is apparent that diagnostic difficulties created by this lesion, even when seen and palpated at operation, have generally led, on the one hand, to underestimation of the actual pathologic disturbance present, emergency laparotomy being performed with a preoperative diagnosis of acute appendicitis; or, on the other hand, the actual disease is overestimated and the lesion thought to be a colon malignancy, leading to radical colon resection. It has been advocated, where the question of diagnosis at laparotomy exists, that the lesion be subjected to biopsy.[8] At the present time, when the trend is toward making every effort to prevent the scattering or entering of neoplastic cells into regional vessels, adjacent bowel lumen, and the operative area, opening the colon for a biopsy of the lesion probably would find little general favor. The fact that the condition has been treated successfully by simple local excision might make it appear that radical colon resection constitutes over-treatment and subjects the patient to an unjustified risk. For the following reasons, however, colon resection appears in most cases to be the procedure of choice: (1) A correct diagnosis of simple ulcer by any means is extremely difficult to achieve, and it therefore seems wisest to treat the condition as if it were the more common lesion it simulates, namely, carcinoma. (2) Many of the simple ulcers are so large (as in cases 1 and 3) that performing an adequate local excision actually would require a colon resection. (3) Occasionally, there are several simple ulcers in the same part of the colon, and excising merely the one most apparent may not be adequate treatment. (4) The mortality rate of colon resection for this condition appears acceptable.

Prior to 1941, 11 cases were treated by resection and anastomosis, with 10 survivors. In the 26 more recent cases reviewed, 18 patients had colon resections performed; 15 survived, 1 died, and in 2 cases, the outcome was not stated. Where free perforation into the peritoneal cavity has occurred, the lesion should be treated in accordance with the principles of colon perforation, namely, exteriorizing the site of perforation, or closing it and performing proximal colostomy. Of the 18 patients in whom colon resection was performed, 6 had right hemicolectomies performed immediately and without prior colon preparation; all of these patients were operated upon with the preoperative diagnosis of appendicitis; of these, 5 survived and in 1 the outcome is not stated.

CONCLUSIONS

Three cases of simple, nonspecific ulcer of the large bowel are presented. The recent literature is reviewed and emphasis is placed on the continued high mortality rate and on the difficulties in diagnosis, especially the differentiation of simple ulcer from acute appendicitis preoperatively and from colonic carcinoma at the time of surgery. The treatment of the condition is surgical, and it appears that where free perforation has not yet occurred, colon resection is the procedure of choice.

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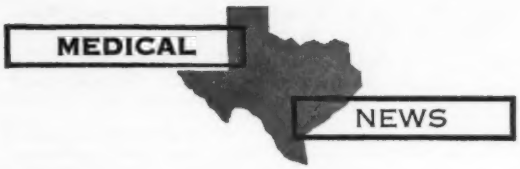


★ Coming Meetings

Texas Medical Association, Houston, April 19-22, 1958 (Executive Council, Jan. 19, 1958). Dr. Denton Kerr, Houston, Pres.; Mr. C. Lincoln Williston, 1801 North Lamar Blvd., Austin, Executive Secy.
American Medical Association, Clinical Meeting, Philadelphia, Dec. 3-6, 1957. Dr. David B. Allman, Atlantic City, Pres.; Dr. George F. Lull, 535 North Dearborn, Chicago 10, Secy.

Current Meetings

OCTOBER

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 13-18, 1957. Dr. Erling W. Hansen, Minneapolis, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.
American Academy of Pediatrics, Chicago, Oct. 7-10, 1957. Dr. Edgar E. Martmer, Grosse Point 30, Mich., Pres.; Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill., Secy.
American Cancer Society, New York, Oct. 30-Nov. 1, 1957. Dr. D. A. Wood, San Francisco, Pres.; Mr. M. R. Runyon, 521 W. 57th, New York, Executive Vice-Pres.
American College of Gastroenterology, Boston, Oct. 21-23, 1957. Dr. Arthur A. Kirchner, Los Angeles, Pres.; Mr. Daniel Weiss, 33 West 60th, New York 23, Executive Director.
American College of Surgeons, Atlantic City, Oct. 14-18, 1957. Dr. Daniel C. Elkin, Lancaster, Ky., Pres.; Dr. Michael L. Mason, 40 E. Erie, Chicago 11, Secy.
American Heart Association, Chicago, Oct. 25-29, 1957. Dr. Edgar V. Allen, Rochester, Minn., Pres.; Mr. John D. Brundage, 44 E. 23rd, New York 10, Secy.
American Hospital Association, Atlantic City, Sept. 30-Oct. 4, 1958. Dr. Albert W. Snoke, New Haven, Conn., Pres.; Dr. Edwin L. Crosby, 18 E. Division, Chicago, Executive Director.
American Society of Anesthesiologists, Los Angeles, Oct. 14-19, 1957. Dr. Irving M. Pallin, Brooklyn, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph, Chicago 1, Secy.
Association of American Physicians and Surgeons, Interim Meeting of Delegates, Oct. 18, 1957. Dr. Cyrus W. Anderson, Denver, Pres.; Mr. Harry E. Northam, 185 N. Wabash Ave., Chicago 1, Executive Secy.
Southern Psychiatric Association, Nassau, Oct. 6-8, 1957. William H. McCullagh, Jacksonville, Fla., Pres.; Dr. Joseph L. Knapp, 210 N. Westmoreland, Dallas, Secy.
Southwestern Medical Association, El Paso, Oct. 9-12, 1957. Dr. Celso C. Stapp, El Paso, Pres.; Dr. C. M. O'Leary, 207 Plaza Court Bldg., Oklahoma City, Secy.

Texas Dermatological Society, El Paso, Oct. 12, 1957. Dr. Charles D. Stewart, Corpus Christi, Pres.; Dr. E. N. Walsh, 1310 Medical Arts Bldg., Fort Worth, Secy.
Texas Geriatrics Society, San Juan, Oct. 25-26, 1957. Dr. Martin S. Buehler, Dallas, Pres.; Dr. J. A. Armstrong, 3810 Swiss Ave., Dallas, Secy.
Texas Neuropsychiatric Association, Dallas, Oct. 18-19, 1957 (with Central Neuropsychiatric Association). Dr. Bruce H. Beard, Fort Worth, Pres.; Dr. Clarence S. Hoekstra, 8215 Westchester Drive, Dallas, Secy.
Texas Pediatric Society, Austin, Oct. 17-19, 1957. Dr. E. M. Wier, Fort Worth, Pres.; Dr. James N. Walker, 5216 W. Freeway, Fort Worth, Secy.
Texas Surgical Society, Waco, Oct. 7-8, 1957. Dr. Truman G. Blocker, Galveston, Pres.; Dr. G. V. Brindley, Jr., Scott and White Clinic, Temple, Secy.

Fourth District Society, Brownwood, Oct. 24, 1957. Dr. Scott H. Martin, San Angelo, Pres.; Dr. Fred Spencer, Jr., 308 W. Chandler, Brownwood, Secy.
Eighth District Society, Bay City, Oct. 19, 1957. Dr. E. Peter Garber, Galveston, Pres.; Dr. John Childers, Univ. of Texas Medical Branch, Galveston, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Oct. 19, 1957. Dr. Kenneth C. Bebb, 1518 10th, Wichita Falls, Chm.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 28-30, 1957. Dr. Herman Fagin, Oklahoma City, Pres.; Miss Alma F. O'Donnell, 503 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Texas State Board of Examiners in Basic Sciences, Austin and Houston, Oct. 18-19, 1957. Henry B. Hardt, Ph.D., Fort Worth, Pres.; Mrs. Betty J. Ratliff, 407 Perry-Brooks Bldg., Austin, Chief Clerk.

NOVEMBER

American Public Health Association, Cleveland, Nov. 11-15, 1957. Dr. John W. Knutson, Washington, D. C., Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Executive Secy.

Radiological Society of North America, Chicago, Nov. 17-22, 1957. Dr. C. Edgar Virden, Kansas City, Pres.; Dr. Donald S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, Miami Beach, Nov. 11-14, 1957. Dr. J. P. Culpepper, Jr., Hattiesburg, Miss., Pres.; Mr. V. O. Foster, 1020 Empire Bldg., Birmingham 3, Secy.

Blackford Memorial Cancer Lectures, Denison, Nov. 5, 1957. Dr. R. G. Gerard, 509 S. Mirick, Denison, Chm.

National and Regional

American Academy of Allergy, Philadelphia, Feb. 3-5, 1958. Dr. Carl E. Arbesman, Buffalo, N. Y., Pres.; Dr. Francis C. Lowell, 65 E. Newton, Boston, Secy.

American Academy of Dermatology and Syphilology, Chicago, Dec. 7-12, 1957. Dr. Nelson P. Anderson, Los Angeles, Pres.; Dr. James R. Webster, 55 E. Washington, Chicago 2, Secy.

American Academy of General Practice, Dallas, March 22-27, 1958. Dr. Malcom E. Phelps, El Reno, Okla., Pres.; Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Executive Secy.

American Academy of Obstetricians and Gynecologists, Los Angeles, April 21-23, 1958. Dr. R. Gordon Douglas, New York, Pres.; Dr. John C. Ullery, Ohio State University Hospital, Columbus, Secy.

American Association for Maternal and Infant Health, 1960. Mr. Howard I. Wells, Jr., 116 S. Michigan Ave., Chicago 3, Executive Secy.

American Association for Thoracic Surgery, Boston, May 16-18, 1958. Dr. Brian Blades, Washington, D. C., Pres.; Dr. Hiram T. Langston, 600 S. Kingshighway, St. Louis 10, Mo., Secy.

American Association of Genito-Urinary Surgeons, Edgewater Park, Miss., April 23-25, 1958. Dr. George F. Cahill, New York, Pres.; Dr. W. J. Engel, 2 East 54th, New York 22, Secy.

American Association of Obstetricians and Gynecologists. Dr. F. Bayard Carter, Durham, N. C., Pres.; Dr. E. Stewart Taylor, University of Colorado School of Medicine, 4200 E. 9th, Denver, Secy.

American College of Allergists, Atlantic City, April 20-25, 1958. Dr. Merle Moore, Portland, Ore., Pres.; Dr. David Thomas, 1467 Harper St., Augusta, Ga., Secy.

American College of Chest Physicians, San Francisco, June 18-22, 1958. Dr. Burgess L. Gordon, Philadelphia, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut, Chicago 11, Executive Secy.

American College of Physicians, Atlantic City, April 28-May 2, 1958. Dr. Richard A. Kern, Philadelphia, Pres.; Mr. E. R. Loveland, 4200 Pine, Philadelphia 4, Secy.

American College of Radiology, Chicago, Feb. 5-8, 1958. Dr. Ira H. Lockwood, Kansas City, Pres.; Mr. W. C. Stronach, 20 N. Wacker Dr., Chicago 6, Executive Director.

American Congress of Physical Medicine and Rehabilitation. Dr. Donald L. Rose, Kansas City, Kan., Pres.; Dorothea C. Augustin, 30 N. Michigan Ave., Chicago, Executive Secretary.

American Dermatological Association, Sun Valley, June 4-8, 1958. Dr. Clark W. Finnerud, Chicago, Pres.; Dr. Hamilton Montgomery, 200 1st, S.W., Rochester, Minn., Secy.

American Gastro-Enterological Association, Washington, D. C., May 30-31, 1958. Dr. M. W. Comfort, Rochester, Minn., Pres.; Dr. F. J. Ingelfinger, 65 E. Newton, Boston 18, Secy.

American Gynecological Society, Asheville, N. C., May 19-21, 1958. Dr. Howard C. Taylor, Jr., New York City, Pres.; Dr. A. A. Marchetti, 3800 Reservoir Rd., N.W., Washington 7, D. C., Secy.

American Laryngological, Rhinological, and Otological Society, San Francisco, May 21-23, 1958. No 1957 meeting. Dr. Lawrence R. Boies, Minneapolis, Pres.; Dr. C. S. Nash, 277 Alexander, Rochester 7, N. Y., Secy.

American Neurological Association, Atlantic City, June 16-18, 1958. Dr. Israel S. Wechsler, New York, Pres.; Dr. Charles Rupp, 133 S. 36th, Philadelphia 4, Secy.

American Ophthalmological Society, White Sulphur Springs, W. Va., May 28-30, 1958. Dr. Walter S. Atkinson, Watertown, N. Y., Pres.; Dr. M. C. Wheeler, 30 W. 59th, New York 19, Secy.

American Orthopedic Association, Hot Springs, Va., June 24-27, 1958. Dr. David M. Bosworth, New York, Pres.; Dr. Harold A. Safield, 715 Lake St., Oak Park, Ill.

American Pediatric Society, Atlantic City, N. J., May 8-9, 1958. Dr. A. Ashley Weech, Cincinnati, Pres.; Dr. A. C. McGuinness, Room 1036, 2800 Quebec St., N.W., Washington 8, D. C., Secy.

American Proctologic Society, Los Angeles, June 29-July 3, 1958. Dr. Julius E. Linn, Birmingham, Pres.; Dr. Norman D. Nigro, 10 Peterboro, Detroit 1, Secy.

American Psychiatric Association, San Francisco, May 12-16, 1958. Dr. Harry C. Solomon, Boston 15, Pres.; Dr. William Malamud, 80 E. Concord, Boston 18, Secy.

American Society of Clinical Pathologists. Dr. J. L. Goforth, Dallas, Pres.; Dr. Clyde G. Culbertson, 1040-1232 W. Michigan, Indianapolis 7, Secy.

American Surgical Association, New York, April 16-18, 1958. Dr. John H. Mulholland, New York, Pres.; Dr. William Altemeier, Christian R. Holmes Hospital 19, Cincinnati, Secy.

American Urological Association, New Orleans, April 28-May 1, 1958. Dr. William J. Baker, Chicago, Pres.; Dr. Samuel L. Raines, 188 S. Bellevue Blvd., Memphis, Tenn., Secy.

International College of Surgeons, U. S. Chapter. Dr. Curtice Rosser, Dallas, Pres.; Dr. Karl Meyer, 1516 Lake Shore Dr., Chicago, Secy.

National Tuberculosis Association, Philadelphia, May 18-23, 1958. Dr. William M. Morgan, New York, Pres.; Mrs. Wallace B. White, 1790 Broadway, New York 19, Secy.

Southern Surgical Association, White Sulphur Springs, West Va., Dec. 10-12, 1957. Dr. Floyd W. McRae, Atlanta, Pres.; Dr. George G. Finney, 2947 St. Paul, Baltimore, Secy.

Southwest Allergy Forum, Shreveport, Feb. 23-25, 1958. Dr. H. Whitney Boggs, Shreveport, Pres.; Dr. J. D. Youman, 2021 Line Ave., Shreveport, Secy.

Southwest Regional Cancer Conference. Dr. O. L. Morphis, 815 Medical Arts Bldg., Fort Worth, Chm.

Southwestern Society of Nuclear Medicine. Dr. Henry H. Turner, Oklahoma City, Pres.; Dr. J. R. Maxfield, Jr., 311 Medical Arts Bldg., Dallas, Secy.

Southwestern Surgical Congress, Houston, March 31-April 2, 1958. Dr. Kenneth C. Sawyer, Denver, Pres.; Dr. C. M. O'Leary, 207 Plaza Court Bldg., Oklahoma City, Secy.

Tri-State Medical Assembly, Shreveport. Dr. H. O. Padgett, Marshall, Pres.; Dr. Jason Sanders, Sanders Clinic, Kings Highway, Shreveport, La., Secy.

United States-Mexico Border Public Health Association, Hermosillo, Sonora, Mexico, April, 1958. Malcolm H. Merrill, Berkeley, Calif., Pres.; Dr. Sidney B. Clark, 243 U. S. Court House, El Paso, Secy.

State

Private Clinics and Hospitals Association of Texas, Dr. R. D. Holt, Meridian, Pres.; Mr. Bill Schumacher, Box 383, Sherman, Executive Secy.

Texas Academy of General Practice, San Antonio, Sept. 22-24, 1958. Dr. G. B. Cleveland, Austin, Pres.; Mr. Donald C. Jackson, 1905 N. Lamar, Austin, Executive Secy.

Texas Academy of Internal Medicine, Houston, December, 1957. Dr. Jay C. Crager, Beaumont, Pres.; Dr. Hugo T. Engelhardt, 1216 Main, Houston, Secy. Meetings restricted to members.

Texas Air-Medics Association, Houston, April 20-21, 1958. Dr. W. D. Marrs, Fort Worth, Pres.; Dr. C. F. Miller, P. O. Box 1338, Waco, Secy.

Texas Association of Blood Banks. Dr. C. D. Fitzwilliam, Fort Worth, Pres.; Miss Marjorie Saunders, 3707 Gaston Ave., Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Galveston, February, 1958. Dr. Arthur M. Faris, Houston, Pres.; Dr. Oran V. Prejean, 4317 Oak Lawn, Dallas, Secy.

Texas Chapter, American Association of Public Health Physicians, Houston, April 20, 1958. Dr. Roy G. Reed, Victoria, Pres.; Dr. A. R. Doane, 410 E. 5th, Austin, Secy.

Texas Chapter, American College of Chest Physicians, Houston, April 20, 1958. Dr. John A. Wiggins, Fort Worth, Pres.; Dr. H. M. Anderson, 224 E. Harris, San Angelo, Secy.

Texas Club of Internists. Dr. Charles M. Darnall, Austin, Pres.; Dr. L. C. Carter, 2600 Procter, Port Arthur, Secy.

Texas Diabetes Association, Houston, April 20, 1958. Dr. H. T. Engelhardt, Houston, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Division, American Cancer Society, Austin, Dec. 5-6, 1957. Dr. Porter Brown, Fort Worth, Pres.; Mr. Curt W. Reimann, 5014 Bull Creek Rd., Austin 3, Executive Director.

Texas Heart Association, Houston, April 20, 1958. Dr. James A. Greene, Houston, Pres.; Mr. Edgar M. Brown, 404 Jesse H. Jones Library Bldg., Texas Medical Center, Houston 25, Executive Director.

Texas Hospital Association, Dallas, May 5-8, 1958. Bolton Boone, D.D., Dallas, Pres.; Mr. O. Ray Hurst, Executive Director, 2208 Main, Dallas, Secy.

Texas Industrial Medical Association, Houston. Dr. Robert J. Potts, Houston, Pres.; Dr. Robert A. Wise, Box 2180, Houston, Secy.

Texas Ophthalmological Association, Houston, April 22, 1958. Dr. Thomas J. Vanzant, Houston, Pres.; Dr. Louis Daily, Medical Arts Bldg., Dallas, Secy.

Texas Orthopedic Association, Houston, April 21, 1958. Dr. Margaret Watkins, Dallas, Pres.; Dr. B. C. Halley, Jr., 524 Doctors Building, Dallas, Secy.

Texas Physical Medicine and Rehabilitation Society, Houston, April, 1958. Dr. Odon F. von Werssowetz, Gonzales, Pres.; Dr. Edward M. Krusen, Baylor Hospital, Dallas, Secy.

Texas Proctologic Society, Fort Worth, February, 1958. Dr. Hugh Beaton, Fort Worth, Pres.; Dr. C. P. Hardwicke, 920 E. 32nd, Austin, Secy.

Texas Public Health Association, Dallas, Feb. 23-26, 1958. Mr. J. N. Murphy, Jr., Austin, Pres.; Mr. H. E. Drumwright, City Health Department, Dallas, Executive Secy.

Texas Radiological Society, San Antonio, Jan. 24-25, 1958. Dr. T. G. Russell, Houston, Pres.; Dr. J. E. Miller, 6407 Forest Lane, Dallas 30, Secy.

Texas Rheumatism Association, Houston, Dec. 6, 1957. Dr. Jesse W. Hofer, Houston, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Society for Mental Health, Houston, March 22-24, 1958. Dr. Virginia Love, Houston, Pres.; Mr. John Lane, 2510 San Antonio, Austin, Executive Director.

Texas Society of Anesthesiologists, Houston, April 20, 1958. Dr. J. D. McCulley, Houston, Pres.; Dr. Randle J. Brady, 3317 Binz, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, Houston, April 20, 1958. Dr. Tate Miller, Dallas, Pres.; Dr. O. P. Griffin, 1101 Medical Arts Bldg., Fort Worth, Secy.

Texas Society of Ophthalmology and Otolaryngology, Austin, Dec. 6-7, 1957. Dr. Owen R. O'Neill, Paris, Pres.; Dr. Edwin G. Grafton, 4319 Oak Lawn, Dallas, Secy.

Texas Society of Pathologists. Dr. Lloyd Hershberger, San Angelo, Pres.; Dr. Mervin H. Grossman, 3121 Bryan, Dallas, Secy.

Texas Society of Plastic Surgeons, Houston, April 19, 1958. Dr. Truman G. Blocker, Galveston, Pres.; Dr. Steve R. Lewis, University of Texas Medical Branch, Galveston, Secy.

Texas Traumatic Surgical Society, Houston, April 20, 1958. Dr. Russell Holt, El Paso, Pres.; Dr. W. E. Crump, 1300 Eighth, Wichita Falls, Secy.

Texas Tuberculosis Association. Dr. Howard T. Barkley, Houston, Pres.; Miss Pansy Nichols, 2406 Manor Road, Austin, Executive Director.

Texas Urological Society. Dr. Jack Crow, Abilene, Pres.; Dr. Ian Thompson, John Sealy Hospital, Galveston, Secy.

District

First District Society, February, 1958. Dr. W. A. Jones, El Paso, Pres.; Dr. E. S. Crossett, 309 Medical Arts Bldg., El Paso, Secy.

Second District Society, Lamesa, Spring, 1958. Dr. J. Vernon McKay, Lamesa, Pres.; Dr. Noble L. Rumbo, Box D, O'Donnell, Secy.

Third District Society, Amarillo, April 5, 1958. Dr. William Klingensmith, Amarillo, Pres.; Dr. H. Fred Johnson, 2308 W. Eighth, Amarillo, Secy.

Fifth and Sixth Districts Society, Corpus Christi, 1958. Dr. Foy Moody, Corpus Christi, Pres.; Dr. Thelma Frank, 129 Rainbow Lane, Corpus Christi, Secy.

Seventh District Society. Dr. Robert N. Snider, Austin, Pres.; Dr. Richard Lucas, 502 W. 13, Austin, Secy.

Ninth District Society, Conroe, Spring, 1958. Dr. Eugene M. Addison, Huntsville, Pres.; Dr. James H. Sammons, Highlands, Secy.

Tenth District Society, Port Arthur, Fall, 1957. Dr. Charles W. Castle, Liberty, Pres.; Dr. Richard O. Clements, 715 Main, Liberty, Secy.

Eleventh District Society. Dr. M. T. Braswell, Henderson, Pres.; Dr. Hugh F. Rives, Jacksonville, Secy.

Twelfth District Society, Corsicana, January 14, 1958. Dr. George C. Bryant, Waco, Pres.; Dr. J. T. Archer, Jr., Meridian, Secy.

Thirteenth District Society, Abilene, 1958. Dr. Roy Wilson, Seymour, Pres.; Dr. R. D. Moreton, 1217 W. Cannon, Fort Worth, Secy.

Fifteenth District Society. Dr. L. E. Rutledge, Daingerfield, Pres.; Dr. O. R. Taylor, Jr., Linden, Secy.

Clinics

Dallas Southern Clinical Society, Dallas, March 24-27, 1958. Dr. C. D. Bussey, Dallas, Pres.; Executive Offices, 433 Medical Arts Bldg., Dallas 1.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 27-29, 1958. Dr. John C. Parsons, 1125 Nix Professional Bldg., San Antonio, Secy.

New Orleans Graduate Medical Assembly, New Orleans, March 3-6, 1958. Dr. Eugene H. Countiss, New Orleans, Pres.; Dr. Maurice E. St. Martin, 1430 Tulane Ave., New Orleans 12, Secy.

Postgraduate Medical Assembly of South Texas. Dr. C. Forrest Jorns, 412 Jesse H. Jones Library, Houston 25, Secy.

State Tumor Conference, Wichita Falls, April 12, 1958. Dr. Edwin C. Bebb, 500 Broad St., Wichita Falls, Director.

Board Examinations

Texas State Board of Medical Examiners, Fort Worth, Dec. 5-7, 1957. Dr. M. H. Crabb, 1714 Medical Arts Bldg., Fort Worth, Secy.

OF GENERAL INTEREST

SHANNON HOSPITAL INITIATES LECTURESHIP IN MEDICINE

Dr. Paul Dudley White, Boston, and Dr. Irvine H. Page, Cleveland, will be guests of the Electrocardiograph Committee of Shannon West Texas Memorial Hospital, San Angelo, at its first Lectureship in Medicine November 16.

This committee accumulated funds for the lectureship by interpreting electrocardiograms at the hospital; their 50 per cent of the collections was put into a fund to be used for the lectureship, which is to be an annual affair.

Invitations will be sent to approximately 3,000 physicians in the state, including members of the Texas Heart Association and Texas Academy of Internal Medicine, and all doctors in the San Angelo trade area. Although invitations are being sent in order to establish the formality of the lectureship and are necessary for attendance, the committee reports that it will be happy to send invitations to any doctors requesting them.

The invitations will include a complete schedule of events; there will be no registration fees, but there will be a charge for the luncheon and banquet which have been planned.

Members of the Electrocardiographic Committee are Drs. F. T. McIntire, J. L. Read, F. M. Spencer, G. N. Irvine, A. E. Landy, R. G. Boster, and T. G. Coleman, all of San Angelo.

Medicine a Factor In Public Assistance

Next month Texans will vote on an amendment to the state Constitution which would increase the maximum monthly payment to needy aged, needy blind, and needy children, the maximum not to exceed $21 from state funds and the amount expended by the state not to exceed the amount from federal funds. Next year, another amendment which would permit direct or vendor payments for medical care on behalf of recipients of Old Age Assistance funds will be before the electorate.

These facts bring special interest of Texas physicians to information recently issued on federal-state public assistance programs released by the Washington office of the American Medical Association.

More than 5,000,000 persons currently are receiving public assistance checks monthly from funds supplied jointly by the United States and states, and probably another half million are on local or state relief rolls, the AMA points out. The United States got into this activity in 1936, when the country was still trying to shake off the depression. If the states would themselves contribute specific percentages for the purposes, the United States agreed to allocate money for the assistance of four classes of indigent—those past 65 years of age, the blind, the totally and permanently disabled,

and dependent children and their guardians. (United States aid is still limited to these groups.) In 1936 the United States contributed $209 million for the use of these people. For the current fiscal year the United States is giving the states $1.6 billion for these programs, a 700 per cent increase in 20 years. At the same time the states have increased their payments to $1.4 billion, for a total of $3 billion to maintain approximately 5.1 million persons on various forms of public assistance. A growing proportion of this money is designated exclusively to pay for medical care.

Before the United States moved into the picture, and for some time after, the relatively few relief dollars available for the many persons in need meant that money was spent only for food, clothing, and shelter. As for many years past, the medical profession generally assumed the major obligation of providing services to the needy sick without charge, the AMA states. This was the philosophy and often the practice in public assistance even between 1936 and 1950, during which all payments for relief were made directly to the recipients themselves, as required by federal law. In 1950 Congress changed the law to improve the medical care of the indigent. The new law permitted the states to set up pools of relief money, from which payments could be made to the vendors of medical care for the treatment of public assistance recipients. (Physicians, hospitals, dentists, nurses, nursing homes, druggists are identified as the "vendors" of medical care.) In 1950, it was estimated that $300 million was being spent annually (by United States, states, and communities) for medical care for relief recipients. About a third of the states decided to take advantage of the new 1950 law and set up "pooled funds" to pay the vendors directly.

In 1956, Congress decided on another change, the AMA relates. It authorized payment to states of $3 per month for each adult on public assistance and $1.50 for each child (to be matched equally by the states), for medical care. But states could no longer make vendor payments within the $60 individual monthly maximum on assistance payments, something that was permitted under the 1950 legislation. Among the 20 or so states that between 1950 and 1956 had adopted the pooling or vendor payment system were a few that actually would lose federal medical care money when the new law went into effect. In response to complaints from these states, Congress again changed the law in 1957. Under this most recent change, states are permitted to make an annual choice between continued use of pooled funds for payments to vendors under the 1950 system or to adopt the new 1956 vendor system with its $3 and $1.50 per month United States contribution. At the same time, they may continue recipient medical care payments under either system, that is, giving money directly to individuals who are expected to assume responsibility for paying their own doctor and hospital bills.

How are states reacting to this new offer of more federal money for medical care of the indigent? According to officials of the Federal Bureau of Public Assistance, turning to vendor payments is bringing about new patterns in health care for the indigent. In many states care for the indigent up to now has been a county responsibility. In others, particularly New England, it is the responsibility of cities and towns. In these situations, the counties and communities are forbidden by state law to accept federal money to help in the medical care of indigents. As a result, many state legislatures are moving to change state constitutions to make it possible for counties and communities to (a) accept federal and state money for this purpose and (b) participate in pooled vendor-plan arrangements. Thus in these areas the tendency is for the management and financing of medical care for the indigent to leave the local level and move to the state level.

Another change of significance to the medical profession also is taking place, the AMA indicates. In the early years of organized relief, as has been noted, the limited money available for public assistance had to be spread over many families, leaving them only enough for food, clothing, and housing. Their medical care was largely a local, private charity proposition, with the doctors and the hospitals giving a great deal of service without pay. Over the years, with the expansion of social security and the growth of industrial and private retirement plans, more and more of the necessities of life are being supplied low-income groups from sources other than public assistance. As a consequence, more and more public assistance money is being released for medical care, something that few public welfare agencies could afford to supply in earlier days. For a specific example, in two large states 10 years ago only 6 per cent of the total welfare dollars was spent on medical care. Today the proportion is 35 per cent, and welfare directors of these states estimate that in another 10 years the proportion will rise to 50 per cent. The explanation is this: security and retirement programs, public and private, are underwriting the public's income to such an extent that the share of public assistance money that can be set aside specifically for medical care is growing at a rapid rate. This is evidence that the public assistance programs are increasingly directed toward the benefit of the aged, the sick, and the disabled.

Veterans Administration Cuts Paper Work For Local Physicians

In an attempt to reduce the paper work for home town physicians who are treating veterans with service-connected disabilities, the Veterans Administration is in the process of placing in effect a new long term treatment program. It is designed to furnish eligible veterans medical care by their home town physicians and at the same time reduce the amount of paper work required on the part of the physician.

The program also will reduce the amount of paper work required by the Veterans Administration. The type of cases to be placed on the long term procedure program are those requiring professional and ancillary services on a recurring basis that can be forecast within reasonable limits and in which the patient has demonstrated his willingness to cooperate with the home town physician and the Veterans Administration by keeping his appointments with the physician.

The chief medical officer for each Veterans Administration regional office will review the files of patients under current treatment, and those cases that will require substantially the same medical care each month over a long period of time will be discussed with the physician to secure an estimate of recurring monthly services. The estimate has been termed "the monthly treatment base."

When the proper monthly treatment base has been reviewed and approved by the chief medical officer, only one authorization will be issued to the home town physician. This will be the authority for the physician to give treatment on this basis for the remainder of the fiscal year, which will be from the date of issuance through June 30. The home town physician need not make further requests for treatment as long as the veteran remains on this program.

In the event a veteran's condition is improved to the extent that he will require less treatment, or if he should become worse and require more treatment, the local doctor will advise the chief medical officer of these facts and make his recommendation as to the adjusted monthly level of treatment that the patient will need. If a patient does not report for treatment as instructed, his doctor can notify the regional

office and the patient will be withdrawn from the long term treatment program.

Some of the advantages of this new program are:

1. Annual authorization will be issued automatically without the necessity of the physician requesting treatment each month.

2. Reports of treatment can be submitted once every 90 days rather than each month as was required previously.

3. The physician may submit his bill on his regular letterhead stationery just as he does with his private patients and without giving minute details and entries formerly required in billing on the Veterans Administration's forms.

PERSONALS

Dr. Don Chapman, Dr. Vincent P. Collins, and *Dr. Jack Abbott,* Houston, and *Dr. Robert M. Moore,* Galveston, gave papers and participated in a panel discussion for the Southwest Louisiana Graduate Medical Assembly in Lake Charles September 13-14.

Dr. Arild E. Hansen, Galveston, gave the Borden award presentation at the twenty-sixth annual meeting of the American Academy of Pediatrics October 5-10 in Chicago; his topic was "Essential Fatty Acids in Infant Nutrition."

Dr. William F. Guerriero, Dallas, spoke on "External Endometriosis" and "Newer Aspects in the Management and Diagnosis of Carcinoma of Female Genitalia" at the October 8-10 assembly of the Louisiana Academy of General Practice. *Dr. E. S. McLarty,* Galveston, was a luncheon speaker on "The Medical Student and the Preceptorship."

Dr. William Crawford, Fort Worth, represented the Harveian Society of London when he placed a wreath at the statue of William Harvey, discoverer of the circulation of blood, during the recent meeting in Chicago of the International College of Surgeons.

David, 10 year old son of *Dr. and Mrs. Dolph Curb,* Houston, died September 15.

Dr. J. J. Crume, Amarillo, a cousin of Abraham Lincoln, celebrated his ninetieth birthday September 9. In practice in Amarillo from 1908 until 1950 (before that in Clio, Gorman, and Rising Star), he is an honorary member of the Potter County Medical Society, Texas Medical Association, and American Medical Association.

Dr. and Mrs. E. W. Coyle, San Antonio, became grandparents twice in September. John William, third son of Mr. and Mrs. Lane T. Sealy of San Antonio, arrived September 22. Anita Helen, daughter of *Dr. and Mrs. J. E. Coyle,* who are in Fort Worth while Dr. Coyle is in the Air Force, was born September 27.

Recent arrivals include girls for *Dr. and Mrs. Ben F. Mitchel, Dr. and Mrs. Harold M. Mims, Dr. and Mrs. Donald A. Corgill,* and *Dr. and Mrs. A. C. Henry, Jr.,* all of Dallas, and boys for *Dr. and Mrs. Charles M. Sloan, Dr. and Mrs. Dan R. Sutherland, Dr. and Mrs. Joseph C. Ogle, Dr. and Mrs. E. R. Cox,* and *Dr. and Mrs. Kenneth Foree,* all of Dallas.

Twin boys were born to *Dr. and Mrs. A. Wilson Harrison,* Galveston, in August. A boy was born to *Dr. and Mrs. John H. Cochrane,* Galveston, in August.

Dr. and Mrs. Thomas O. Shindler, Houston, are parents of a boy born September 11.

Cerebral Palsy Offices To Be in Austin

The home offices of United Cerebral Palsy of Texas soon will be moved from Dallas to Austin. Lee Proedoehl, Green Bay, Wis., is the newly appointed executive director of the organization, and Dr. Ralph Hanna, Austin, is the president of the executive board.

AUTOMOTIVE CRASH STUDY EXTENDED

On November 1, seven Texas counties—Gregg, Brazos, Ector, Midland, Potter, Tom Green, and Navarro—will inaugurate a new area of the Texas-Cornell Automotive Crash Injury Research program. This study will involve reporting of all 1956, 1957, and 1958 cars involved in accidents, both injury-producing and noninjury-producing. At the same time, Tarrant, Grayson, and Taylor Counties will replace the currently active areas (Wichita, Nueces, and Lubbock Counties) in a continuing study of injury-producing accidents in cars of all years of manufacture.

Automotive Crash Injury Research was initiated in 1953 by Cornell University Medical College to identify those items in passenger cars which are causing injury or death to occupants of cars involved in accidents. Prior to the initiation of this research program causes of *accidents* were thoroughly investigated whereas causes of *injuries* were ignored. Since November 1, 1955, the Texas Medical Association, the Texas State Department of Health, and the Texas Highway Patrol have cooperated with Cornell in this attempt to fill this gap in knowledge and to reduce the enormous toll taken yearly in lives and injuries by highway automobile accidents.

Data from Texas and other cooperating states have formed a basis by which automotive manufacturers have already made important design changes specifically engineered to provide protection during accidents, such as seat belts, spring-proof door latches, energy-absorbing steering wheels, and padding. In addition these data are producing statistics which promise to implement medical treatment of crash victims through more definitive knowledge of the nature and scope of the problem.

Texas physicians in the areas covered by the study are invited to record information on the nature and extent of all injuries on the brief medical form provided by Cornell. This medical information and accident data supplied by state troopers are analyzed by Cornell.

The continued effectiveness of these studies depends on the careful recording of injuries by the individual physicians in the areas under study, stated Dr. Denton Kerr, President of the Texas Medical Association. He has written each doctor in the 10 Texas counties which will come under the study on November 1 and asked "earnest participation in this attack on one of the nation's foremost epidemiological problems."

ULTRASONIC TESTING FOR FRACTURES

Concrete slabs and blocks occasionally have caused fractured bones, but that is not the reason researchers at the Hines, Ill., Veterans Administration hospital became interested in the concrete business.

The concrete industry employs an ultrasonic method of testing the quality of concrete slabs and blocks. Study of the method helped a research group at the Hines hospital in development of a technique utilizing ultrasonic waves which test the extent of bone fractures and the degree to which they may have healed.

Preliminary studies have shown that this technique offers an objective and accurate method of analyzing the degree of healing, helping in the reduction of bed stay for hospitalized veterans, the Veterans Administration reported.

The device used in the technique is essentially a low energy, ultrasonic transmitter which sends its waves down the extremity of the patient. A receiver at the opposite end of the extremity records the length of time that it has taken for the pulse to go down the extremity. The change, or variation in the time, is an indication of the degree of fracture healing.

This method analyzes the degree of healing of a fracture by the measurement of sound velocity across a fracture site compared to that of the opposite normal extremity.

The measurements have proved to be a valuable adjunct to roentgen ray and clinical examination in fracture cases, according to the Veterans Administration.

The project was developed at the radioisotope and the orthopedic departments of the Hines hospital by Dr. George T. Anast and Dr. Irwin M. Siegel, with Theodore Fields, M.S., physicist in the hospital's radioisotope service.

Diathermy Machines Can Cause Disasters

Illegal use of diathermy machines presents a serious threat to communications, according to the July *Popular Electronics*. The machine often produces signals which interfere with police and radio transmitters, airplane landing communications, and radar screens used by airports to prevent midair collisions. Such interference has had tragic results; in 1954 a Chicago housewife's rented diathermy machine jammed radio police calls and enabled the murderer of a bank guard to escape with more than $10,000. The same year, machines interfered with instrument landing signals and caused the crash of at least one large airliner. The Federal Communications Commission, as far back as 1947, restricted diathermy machines to two frequencies, and allowed owners six years to change over. But early 1957 saw more than 10,000 machines still operating on illegal frequencies.

VAN METER AWARD

The best essays concerning original work on problems related to the thyroid gland will be considered for the American Goiter Association's annual Van Meter Prize of $300 and two honorable mentions. Either clinical or research investigations may be included; the papers may not exceed 3,000 words and must be sent to Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, N. Y., not later than February 1.

MEDICAL MEETING LIST TO BE DISTRIBUTED

A new service to physicians and dentists of Texas through a published booklet listing medical and dental meetings and lectures, entitled "WHAT GOES ON," will be given by the University of Texas Postgraduate School of Medicine in Houston. Hospitals, medical societies, specialty societies, and medical schools are asked to contribute listings of their meetings. The first issue will cover the period from January 15 to February 15, 1958.

Deadline for submitting material will be the fifteenth of the month of publication. Correspondence should be directed to *"What Goes On,"* 410 Jesse Jones Library Building, Texas Medical Center, Houston 25.

CADAVER SHORTAGE A PROBLEM

To relieve the increasing shortage of cadavers threatening the quality of medical education in the United States, a committee of the National Society for Medical Research has proposed a six-part program.

"A majority of medical colleges report that they are unable to obtain enough bodies to teach student doctors efficiently," said Dr. Oliver P. Jones, head of the anatomy department at University of Buffalo Medical School and chairman of the committee. "Some schools have been forced to drop such important courses as surgical anatomy."

A survey of public opinion toward anatomical studies in which a depth-interview study will discover underlying sentiments has been proposed by the committee.

"Changing times, plus outmoded laws and ancient prejudices mean increasing trouble for the anatomy departments of many of America's medical colleges," said Dr. Jones. He explained that the University of Buffalo operated its anatomy department last year with 23 cadavers short of adequate instruction, and that the faculty was not able to give anatomical instruction to nurses and people in the public health fields.

American Board of Obstetrics and Gynecology

The Part I examinations of the American Board of Obstetrics and Gynecology will be held January 2, 1958, in various sections of the United States. Candidates notified of their eligibility to participate in these examinations must submit their case abstracts within 30 days of notification.

Allergy Care Largely Neglected

"Supposing we had a super-large city big enough to contain all of the people in New York, Chicago, Los Angeles, San Francisco, Denver, Omaha, Miami, and Syracuse. Supposing further that every one of the men, women, and children there suffered a peculiar illness. . . . Millions were continually suffering from stuffy, runny, sneezy noses, often losing sleep and being absent from work. Supposing that three million in this city, a large percentage of whom were children, were having spells of choking and difficulty in breathing, in some cases continuously. . . . Hundreds of thousands were suffering from drug allergy—hives, rashes, asthma, and even more serious changes in vital organs."

"These and many others would be the affliction of all such people in this hypothetical city of 17 million. This is the estimate of the number of people in the United States who have allergy."

Such is the introduction to a new pamphlet "Allergy—A Story of Millions," produced jointly by the Committee on Public Education of the American Foundation for Allergic Diseases and the Public Affairs Committee. The pamphlet describes the various kinds of allergies—asthma, hay fever, hives, eczema, and others. It describes the specific causes of the different allergies, and tells how they are diagnosed and treated. Copies can be obtained for 25 cents each from the Public Affairs Committee, 22 East 38th Street, New York.

Companionship Therapy Is Tested

Companionship therapy is playing an increasingly important part in "cracking the loneliness barrier" that hinders recovery of the mentally ill, the Veterans Administration reports. Some carefully chosen volunteers are serving as regular companions for patients who have no relatives to visit them. They are encouraged to become close friends, and sometimes patients are given passes from the hospital to visit and learn about the outside world. Development of mental hygiene societies and communitywide mental hygiene clinics has been the outcome of the program in some instances. In others, young people are encouraged to enter the health field, especially social service.

Hospital Ethics Revised

A new revised code of ethics for hospitals and hospital administrators has been released by the American Hospital Association and the American College of Hospital Administrators. It consists of a 10 point statement on hospital ethics and a 10 point statement of principles of conduct for hospital administrators. By following these principles, says the statement introductory to the principles, the hospital will be better able to perform its function in a manner that will merit and receive the endorsement and support of the community it serves.

Texas Hospital Accreditation Institute

A Texas Hospital Accreditation Institute, given through the cooperation of the Texas Hospital Association, Private Clinics and Hospitals Association, and Texas Medical Association, will be held in Austin February 20-22. Representatives of all hospitals in the state which are not accredited by the Joint Commission on Accreditation of Hospitals will be eligible to attend. Details are being completed, and full information may be obtained by writing to O. Ray Hurst, Executive Secretary, Texas Hospital Association, 2208 North Main, Dallas.

Journal on Arthritis and Rheumatism

The American Rheumatism Association soon will begin publication of a new medical journal, *Arthritis and Rheumatism, The Official Journal of the American Rheumatism Association.* Publishers will be Grune & Stratton, Inc., New York. Dr. William S. Clark will be editor.

MEDICAL MEETINGS

World Medical Assembly Held

The annual eleventh General Assembly of the World Medical Association has just been completed in Istanbul, Turkey, and the association is looking forward to the next assembly to be held August 15-20, 1958, in Copenhagen, Denmark. A second World Conference on Medical Education is being planned for 1959 in the United States.

At its meeting in June, the American Medical Association adopted a resolution in support of the World Medical Association and recommending that every member of the AMA join the United States Committee of the World Medical Association. A benefit of membership in the United States Committee is the privilege of attending the annual assemblies of the World Medical Association as an official observer.

The worldwide group has become a strong factor in protecting and promoting the professional interests of the medical profession and the cause of world peace. Now in its tenth year, it is a federation of the most representative national medical association in each of 53 nations, and more than 700,000 physicians are members.

Every individual physician in the United States is eligible for membership and dues are $10 per year. Physicians who desire membership may write Dr. William M. Crawford, 612 Sixth Avenue, Fort Worth, who is state chairman for the World Medical Association.

American College of Physicians To Meet in Puerto Rico

The seventh regional meeting of the American College of physicians will be held in San Juan, Puerto Rico, October 25-26, with Dr. Charles A. Doan, Columbus, Ohio, second vice-president of the College, serving as official representative and guest speaker. All physicians, interns, and residents are welcome.

Registration begins Friday evening, October 25, and the program opens with greetings from Dr. F. Hernandez-Morales, governor for Puerto Rico of the college. Scientific papers will be presented Friday evening and all day Saturday primarily by Puerto Rican members of the college at the auditorium of the Puerto Rico Medical Association. The meeting will conclude with cocktails and dinner Saturday evening.

Presiding over the various sessions will be Dr. Arturo L. Carrion, San Juan; Dr. Oscar G. Costa-Mandry, Santurce; and Dr. Rafael Rodriguez-Molina, San Juan.

The Texas Geriatrics Society will meet concurrently in San Juan, and visitors are welcome.

MELANOMA CONFERENCE

The clinical conference on melanoma, sponsored by the University of Texas M. D. Anderson Hospital and Tumor Institute and Postgraduate School of Medicine, will be held November 13 in Houston. Topics will be "Etiological Factors Generally Considered to be Associated with the Development of Melanoma," "Role of Complexion and Race on the Incidence of Pigmented Moles and Melanoma," "Primary Lesion," "Secondary Lesion," "Diagnostic Problems," "Recurrence of Pigmented Nevi After Incomplete Removal," "Surgical Management of Melanoma of the Head and Neck," "Results of Radical Node Dissections of the Trunk in Metastatic Melanoma," "Chemotherapy in Disseminated Disease," and "End Results of Treatment of Patients with Malignant Melanoma."

Dr. Arthur C. Allen, Miami; Dr. Thomas B. Fitzpatrick, Portland, Ore.; Dr. George T. Pack, New York; Dr. Herman Pinkus, Detroit; and Dr. R. J. Schoenfeld, Detroit, plus members of the M. D. Anderson staff, will lead the discussion.

Members of the Academy of General Practice desiring credit for the conference must register in advance with the Postgraduate School of Medicine.

Immediately following this conference will be the Fourth Conference on the Biology of Normal and Atypical Pigment Cell Growth.

World Congress of Gastroenterology

The World Congress of Gastroenterology will meet May 25-31 in Washington, D. C. Diseases for discussion have been chosen because of variations in epidemiology and clinical behavior in various parts of the world. Physicians and scientists, purposely selected from countries where these differences are known to exist, will analyze these variations. Dr. H. M. Pollard, University Hospital, Ann Arbor, Mich., can supply full details of the meeting.

Britisher Addresses Houston Group

Dr. Martin Bodian, London, spoke to the Houston Chapter of the National Cystic Fibrosis Research Foundation at the Texas Children's Hospital October 7.

Ophthalmologists Plan Cruise Congress

The Pan American Association of Ophthalmology will hold its second cruise congress February 1-14. The itinerary includes a day each in San Juan, Puerto Rico; Ciudad Trujillo, Dominican Republic; Kingston, Jamaica; Port-au-Prince, Haiti; and Nassau.

Dr. James H. Allen, New Orleans, is chairman of the program committee, which is arranging symposiums, free papers, motion pictures, seminars, and exhibits. Meetings will be held on shipboard, and there will be opportunities to visit hospitals and to meet the staffs of medical schools in the islands.

Fundamental Cancer Research

The twelfth annual Symposium on Fundamental Cancer Research will be held March 6, 7, and 8, 1958, at the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston.

The topic for the symposium will be "Radiation Biology and Cancer," with the staff at M. D. Anderson Hospital giving general papers the first day and the final two days consisting of papers presented by other recognized authorities in radiation research.

Chairmen for the radiation biology sessions include Titus C. Evans, Radiation Research Laboratory, University of Iowa College of Medicine, Iowa City; Dr. Jacob Furth, Pathology Department, Children's Cancer Research Foundation, Inc., Boston; and Dr. Henry S. Kaplan, Radiology Department, Stanford University Medical School, San Francisco. General chairman of the symposium is Warren K. Sinclair, chief physicist at the University of Texas M. D. Anderson Hospital and Tumor Institute.

Swedish Doctor to Speak

Dr. Hans Ludwig Kottmeier, Radiumhemmet, Stockholm, Sweden, will be the guest of the Houston Radiological Society and the Houston Gynecological and Obstetrical Society October 28 when he lectures on "Treatment of Ovarian Cancer." While in Houston, Dr. Kottmeier will stay with Dr. Gilbert H. Fletcher of the University of Texas M. D. Anderson Hospital and Tumor Institute.

MEDICOLEGAL NOTES

Surgeons Are Liable For Faulty Sponge Counts

Undoubtedly, one of the more frequent causes of malpractice threats or suits arising out of surgical procedures involves sponges being left in the patient. These cases give rise, for the most part, to three legal points.

The first deals with the liability of the physician for the injuries resulting from a sponge being left in the patient. A case very much in point is Thompson v. Barnard.* The facts in this case disclose that in 1930, the patient was operated on, and from that date until a second operation some 5 years later, she had endured continuous pain and suffering. The second operation revealed pieces of gauze sponges in her intestines. As to the liability of the physician who had failed to remove these sponges during the operation, the court made this statement:

> While there are decisions to the contrary, the apparent weight of authority is that a surgeon's failure to remove a sponge before closing the incision is negligence as a matter of law.

The effect of this holding by the court as to the liability of the surgeon when it stated that this was "negligence as a matter of law" put the operating surgeon in a position where liability is almost certain. This is due to the fact that when such is the case, all that the injured patient would have to show to establish negligence on the part of the physician is that the sponge had not been removed. The court, in effect, is saying that there is no excuse for leaving a sponge or sponges in a patient, and if such incident does occur, then the operating surgeon will be held liable for any resulting injury to the patient.

The next point which frequently arises in the "sponge" cases deals with the statute of limitations. The statute of limitations in Texas in malpractice cases is 2 years. This means that a patient who has been injured has a period of 2 years from the time of the alleged negligent act to bring a suit to recover for the injuries suffered. If such action is not brought within this 2 year period, then the patient is barred from bringing this action even though the claim may have been meritorious. This question of when the statute of limitations begins to run in "sponge" cases is often very important because of the fact that it may be some time before it is actually discovered that a sponge has been left in the patient. It has been argued in several cases that the statute of limitations should not begin to run in a case of this nature until the patient knew or should have known that a sponge had not been removed. The courts, though, have overruled this line of reasoning, and it was very clearly pointed out by the court in Thompson v. Barnard, supra, when it said:

> As a general rule, the statute of limitations commences to run upon a cause of action for tort from the time the duty owing to plaintiff is breached by the wrongful or negligent act of the defendant, even though in some cases the plaintiff is ignorant of the existence of his cause of action, or although damages were not sustained until after the commission of the tort. . . . Generally speaking, in the absence of fraud, the plaintiff's ignorance or inability to learn of his cause of action will not prevent the statute of limitations from running.

Therefore, it can be seen from the holding in this case that the patient has 2 years from the date of the alleged negligent act in which to sue, and unless fraud can be shown, the patient would be barred after that length of time from commencing his action.

The third point which is often raised deals with fraudulent concealment. Normally, this will arise only when the patient has not discovered the presence of the sponge until after the statute of limitations has run and he would not normally be able to commence the suit. Fraud is an exception to the statute of limitations, and if the injured party can show that he was prevented from bringing his suit within a 2 year period of time, not because of his lack of diligence, but because the surgeon fraudulently concealed the facts, then the patient may well be able to proceed with a suit even after the 2 year period has expired.

A case dealing with this point is Carrell v. Denton.† This was also a "sponge" case, and the facts show that the patient did not discover until some 5 years later that a sponge had not been removed. The physician relied upon the defense that the suit was barred because of the statute of limitations. The patient then insisted that the suit had not been brought within the proper length of time owing to the fraudulent

*142 S.W. (2d) 238.

†157 S.W. (2d) 878.

concealment of the facts by the surgeon. The court, in holding that there had been no fraudulent concealment on the part of the physician held that:

> In conducting a surgical operation on his patient, and in respect to any treatment he may administer, a surgeon is under the duty to exercise due care. His failure to discharge this duty constitutes negligence and therefore is wrongful—but the failure does not, of itself, constitute fraud or expose the surgeon to the imputation of fraudulent concealment. Among other essential ingredients, a fraudulent concealment in cases of this sort includes, first, actual knowledge of the fact that a wrong has occurred and, second, a fixed purpose to conceal the wrong from the patient.

To summarize briefly the effect of these two cases, it should be pointed out that in "sponge" cases, there is little or no defense for the physician should a lawsuit arise, unless it can be shown that the sponge was left in the patient for an express reason (such as to stop bleeding and to be subsequently removed). Also, the patient must bring his action for any alleged injuries, and this would apply in all malpractice cases, within a period of 2 years from the date of the alleged negligent act, unless he can prove that fraudulent concealment on the part of the physician has prohibited him from so doing.

—PHILIP R. OVERTON, LL.B.

EDUCATION

Austin Arranges Hospital Course For High School Students

Austin high school students between 16 and 21 years of age who have satisfactory grades have the opportunity to enroll in a new course, "Introduction to Hospital Sciences." Courses are being conducted in Brackenridge and Seton Hospitals, and are designed to give young people an understanding of these fields and to make future study easier and more interesting. During the junior year, a survey course of hospitals and services is taught. It covers 28 fields from ethics and history to the organization of each department and service. Following this, the student is rotated through 10 hospital departments in orientation to patient care, spending three weeks in each department. The senior year is devoted to advance training in one specialized field of patient care according to the interests and abilities of each student and under the direction of the department head.

Sister Kenny Foundation

Postdoctoral scholarships in the field of neuromuscular diseases are available through the Sister Elizabeth Kenny Foundation; they are designed for scientists at or near the end of their fellowship training in basic or clinical fields. Each grant provides from $5,000 to $7,000 a year for a 5 year period, and candidates from American and Canadian medical schools are eligible. Inquiries may be directed to Dr. E. J. Huenekens, Medical Director, Sister Elizabeth Kenny Foundation, 2400 Foshay Tower, Minneapolis 2.

MEDICAL BRANCH FACULTY NOTES

Several new members of the University of Texas Medical Branch faculty have been announced recently. Dr. Sam Schulman, formerly of Boston University, and Dr. Norman G. Hawkins, University of Washington, Seattle, have joined the faculty of the Department of Preventive Medicine and Public Health in Galveston. Dr. John R. Derrick has been named assistant professor of thoracic surgery. Dr. William Harlan, University of Indiana, has an appointment in neurology. Dr. Charles Powell is instructor in obstetrics and gynecology. Dr. Bruce E. Walker, McGill University, Montreal, is assistant for fiscal affairs for Medical Branch hospitals.

Dr. Robert M. Moore, chairman of the Department of Surgery, has been appointed to the Conference Committee for Graduate Training in Surgery by the Council on Medical Education and Hospitals of the American Medical Association.

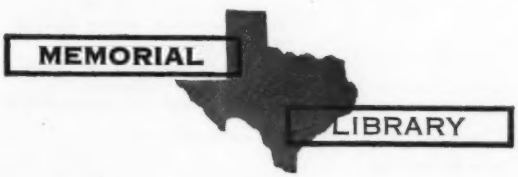
Dr. William C. Levin is in New York for the period from September 29 to October 27 to take part in conferences at the Memorial Center for Cancer and Allied Diseases.

Fellowships in Allergic Diseases

Young doctors interested in furthering their knowledge of allergy may apply for postdoctoral fellowship sponsored by the American Foundation for Allergic Diseases. Graduates of approved medical schools who have completed 1 or 2 years of graduate training required as preliminary certification by the Boards of Internal Medicine and Pediatrics are eligible. Requests for information and applications may be sent to Dr. Colin M. McLeod, 820 Maloney Clinic, Thirty-Sixth and Spruce Streets, Philadelphia 4. December 15 is the deadline for applications to be filed.

University of Texas

During 1955-1956, component units of the University of Texas received nongovernmental gifts and grants as follows: Medical Branch, $812,059; Southwestern Medical School, $375,253; M. D. Anderson Hospital and Tumor Institute, $368,340; Postgraduate School of Medicine, $38,950; and Dental Branch, $3,674. Also, a half million dollar William Buchanan Foundation grant was made for medical education and research with the recommendation that it be used largely at Southwestern Medical School, but it was not restricted to that institution.



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IV. Partnerships

Since partnership practice is on the increase, the whys and wherefores should be examined by those desirous of this type of practice. The following references should be helpful in that they discuss the advantages, disadvantages,

**This is the last of a series of four bibliographies on medical economics which are being published in the* Journal. *Topics are investments, insurance, fees, and partnerships.*

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Gifts to the Library

Dr. Thomas Archer, Austin, 69 journals; 42 pamphlets.
Dr. Otto Brandt, Jr., Austin, 12 journals.
Dr. Henry L. Hilgartner, Austin, 22 journals.
Dr. J. E. Johnson, Austin, 5 journals; 9 reprints.
Dr. S. N. Key, Jr., Austin, 4 journals.
Dr. John Roberts Phillips, Houston, 2 journals.
Dr. Nelson L. Schiller, Austin, 32 journals; Pamphlets and reprints.
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★ Books

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BOOK NOTES

Roentgen Signs in Clinical Diagnosis

ISADORE MESCHAN, M.D., Professor and Director of the Department of Radiology at the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.; with the assistance of R. M. F. Farrer-Meschan, M.B., B.S., Melbourne, Australia. 1058 pages. 2216 illustrations on 780 figures. $20. Philadelphia, W. B. Saunders Company, 1956.

This book is written primarily for medical students, residents in radiology, and practicing physicians other than radiologists.

The most remarkable and useful feature of the book is the arrangement of the material by which the student is introduced to the objective method of radiographic analysis.

The book is divided into sections based on anatomical regions. Each section contains a differential diagnosis based on the radiographic abnormalities found in the region of body under discussion including a list of diseases which can cause the radiographic abnormalities seen on the film. Every listed disease is then described both from a radiographic and clinical standpoint in the text and illustrations.

By using this system of differential diagnosis, the student can start with the radiograph and analyze it objectively as to radiographic abnormality. Then by looking up this abnormality in the outline, he can find the list of diseases which can produce the radiographic pathology he has seen on the film. After correlation of clinical findings with these objective radiographic findings, a diagnosis of the patient's disease may be made or at least a small number of possibilities will remain in the differential diagnosis. This type of objective approach allows the student to analyze an x-ray film with reasonable assurance before having become familiar with all of the radiographic vagaries of all diseases affecting a given region.

This book should be recommended to serious students who are particularly interested in clinical radiology. Because of the unusual arrangement of the material, this should be in the library of every practitioner of medicine who occasionally interprets radiographs. Reviewing this book has been a pleasure because of the attractive make-up, the good paper, the large readable print, and the excellence of the illustrations.

—Gordon L. Black, M.D., El Paso.

Ultramicro Methods for Clinical Laboratories

EDWIN M. KNIGHTS, JR., M.D., Associate Pathologist, Director of Clinical Pathology and Blood Bank; RODERICK P. MACDONALD, Ph.D., Director of Clinical Chemistry and Research Advisor; JAAN PLOOMPUU, Chief, Division of Ultramicro Chemistry and Research Associate; all of Harper Hospital, Detroit. 128 pages. $4.75. New York, Grune & Stratton, 1957.

This small volume represents a tremendous amount of detailed information not readily available in any other text known to the reviewer. Perhaps for the first time readers can adjust themselves to the fact that so-called ultramicro methods are not the usual macro methods performed on a "cut down" basis. The authors repeatedly point out entirely new techniques now defined as ultramicro methods. All determinations are reported in micrograms or microliters. All studies are performed on serum. This necessitates only the pricking of the heel or finger for 0.3 ml. of blood, which the authors state is sufficient for "a fairly complete survey." These methods are based on titrimetric, colorimetric, and gasometric techniques, which are adaptable to minute quantities of cerebrospinal fluid.

Recommendations are made concerning equipment, and although these recommendations are made in detail they are modest. The authors emphasize the need for a separate corner where this division of clinical chemistry can be set up and where one or more technologists can devote all or most of their time to this. It is strongly recommended that care of glassware and instruments be solely under the care of the technologist doing the work of ultramicro chemistry and that ultramicro procedures be used routinely so that the technologist always may be versed in the procedures and readily available. There is a special discussion of equipment with particular reference to pipetting which is among the best presented within the knowledge of the reviewer.

The reviewer is not quite clear why the authors recommend the Baird flame photometer over other models, but it should be noted that other flame photometers may be used. This is the only point in which the authors can be accused of being somewhat arbitrary.

The authors are also insistent that flame photometry determinations for calcium are inaccurate due to high flame temperatures and high photodetector sensitivity. They prefer the titrimetric method. In the reviewer's laboratory we have found the colorimetric method of calcium determination by macro methods to be satisfactory although time consuming. We presently are using flame photometry and are achieving rapid determinations which we believe to be reproducible. We have not used the indicator, eriochrome black T, recommended by the authors, which they state gives a sharp end point. This may well be a definite advance in an otherwise difficult procedure.

Constantly the authors are emphasizing the need for controlled studies, pointing out where known controls can be obtained for comparison.

The organization of the book is excellent with quick references made possible by division into 21 chapters. A number of excellent photographs accompany the discussion, and a fine bibliography is presented. Somewhat disappointing to the reviewer is the lack of any procedure for toxicological work; it is hoped that such procedures may be included later. The all important sedimentation rate is not included in ultramicro methods.

The authors have presented a monograph which may be monumental in directing the attention of clinical laboratory directors and technologists toward ultramicro methods, especially in children's hospitals and in those cases in which for a variety of reasons only small amounts of spinal fluid is available or in which it is virtually impossible or at least embarrassing to obtain adequate amounts of blood by venipuncture. The book insists, however, that ultramicro procedures should be used routinely as much as possible, if the size and nature of the hospital permit it.

The book is to be highly recommended to all clinical pathologists and all those working in the field of clinical chemistry.

—Jarrett E. Williams, M.D., Abilene.

Experimental Psychology and Other Essays

I. P. PAVLOV. 653 pages. $7.50. New York, Philosophical Library, 1957.

The Road to Inner Freedom

BARUCH SPINOZ. Edited and with an Introduction by Dagobert D. Runes. 215 pages. $3. New York, Philosophical Library, 1957.

The Practice of Medicine

Editor, JONATHAN CAMPBELL MEAKINS, M.D., L.L.D., D.Sc. ed. 6. 1916 pages, 318 illustrations including 4 in color. $16. St. Louis, C. V. Mosby Company, 1956.

Dr. Meakins has gathered together a brilliant array of physicians, allowing each to expound on the field of medicine as it applies to his specialty in modern times. As those who have used his previous editions will testify, this author has a peculiar ability to assemble a great amount of factual material in a compact, readable, and usable form.

The text is divided into appropriate sections, relating to infectious diseases of various nature, chemotherapy, allergic states, and diseases peculiar to the various systems of the body including an excellent section on neurological diseases and a new chapter on the psychosomatic aspects of medicine.

This is an outstanding work as far as text is concerned and is further clarified by excellent illustrations.

—M. K. Patteson, M.D., Lampasas.

The Patient Speaks; Mother Story Verbatim In Psychoanalysis of Allergic Illness

HAROLD A. ABRAMSON, M.D., Associate Attending Physician and Chief of the Allergy Clinic, Mount Sinai Hospital, New York; Research Psychiatrist, Biological Laboratory, Cold Spring Harbor; Assistant Clinical Professor of Physiology, Columbia University. 239 pages. $3.50. Washington, Vantage Press, 1956.

Dr. Abramson has condensed the essential features of complete and successful psychoanalytic treatment of a 32 year old woman who had suffered eczema and asthma since infancy. Unique is the fact that the significant selections are reproduced verbatim, having been selected from tape recordings made during 300 or more analytic sessions over a period of several years.

The author's objective in preparing this treatise has been to present the picture of "the engulfing parent" which he denominates the "Cronus complex" after the Greek mythological figure of Cronus, ruler of the universe, who attempted to perpetuate his power by the expedient of swallowing his sons as they were born. The author has added, in brackets, minimal comments addressed to the reader which will be helpful to the nonpsychiatric seeker after a better understanding of the psychoanalytic method. It is to be hoped that this work will be widely read by physicians since it affords a concise and thoroughly readable delineation of psychosomatic relationships.

Dr. Abramson also makes a strong plea for improvement in the field of communications where psychotherapy is concerned, in order that evaluation of methods and results may be more accurately accomplished. It is to this end that he departs from the strictly orthodox analytic procedure in his use of recorded interviews. He also uses light hypnosis on occasion, another variation from the orthodox. It is not surprising that the author in a sense has flouted tradition when his interests, as noted in his affiliations, cover such a wide variety of allied fields.

—William B. Cline, Jr., M.D., Corpus Christi.

Epilepsy; Grand Mal, Petit Mal, Convulsions

LETITIA FAIRFIELD, C.B.E., M.D., D.P.H. 159 pages. $4.75. New York, Philosophical Library, 1957.

This small book summarizes for the public what is known about the various forms of epilepsy, what treatments are available, what special problems are presented by the disease in children, and what employments the epileptic can expect to find for himself in the world. To assist doctors and social workers, the author has included a questionnaire which answers simply the most frequent questions asked by those coming new to the disease. The book will be a help to epileptics in getting their troubles in the proper perspective and will give confidence to those who deal with epileptics in the family circle, in factory or office.

A Visit to the Hospital

Written by FRANCINE CHASE, Pictures by James Bama. Prepared under the supervision of Lester L. Coleman, M.D., with an introduction by Flanders Dunbar, M.D. 68 pages. $1.50. New York, Grosset & Dunlap, 1957.

Some Milestones in the History of Hematology

CAMILLE DREYFUS, M.D., with a foreword by Sir Lionel E. H. Whitby, Regius Professor of Physic, Cambridge University. 87 pages. $4.50. New York, Grune & Stratton, 1957.

The type and format of this small book are legible and the general outline is appealing. A forward by Lionel Whitby is very brief. A wealth of information on the historical aspects of hematology is included.

The book is divided into four sections, including the early history of leukemia, chronic hemolytic jaundice, and polycythemia vera, and 43 pages entitled "A Glance at the History of the Blood." If the book can be entitled "Milestones," this section should be entitled "Pebbles." It consists almost entirely of one sentence historical facts, and appears rather unconnected.

On the whole the book is well done and should be of interest to those intent upon the history of medicine. The last section, devoted to the life of Georges Hayem, is a brief outline surprisingly complete of his scientific achievements. The contributions in various fields of this inspired discoverer and brilliant teacher demonstrate what intellect and industry can achieve through the proper use of scientific instruments. This section is recommended for all students of medicine.

—Norris A. Wimberly, Jr., M.D., Tyler.

Concise Anatomy

LINDEN F. EDWARDS, Ph.D., Professor of Anatomy, Ohio State University. ed. 2. 502 pages. $7.50. New York, McGraw-Hill Book Company, 1956.

The organization of this book is interesting, for it is a concise anatomy just as the title indicates. "Part I, General Anatomy" is preceded by an introduction which goes into definitions of anatomy and its subdivisions, planes, surfaces, directions, and terminology. It also takes up the parts of the human body, physical and constitutional types, and the relationship of animal and human species. Reference is made to maladjustments of the human body to erect posture and the sexual and embryological aspects of development.

In "General Anatomy" more specific divisions are taken up such as microscopic anatomy, body organization, embryology, and cytology. General osteology includes all of these plus a study of the periosteum, blood supply, and chemical, architectural, and physical properties of bone and cartilage. Applied anatomy is also stressed. The lack of radiological help in teaching anatomy is a disappointing thing to a radiologist. It is in the reviewer's opinion a real shortcoming that radiological anatomy is not included. Any anatomy book now presented which does not recognize radiological anatomy as an integral part of its presentation is not keeping up with medicine as it is being practiced all over the world. It is also a glaring deficiency in our interns as they come from medical school that their knowledge of living radiological anatomy is so deficient.

The illustrations are well done and timely, and the discussion is orderly and concise. The author is to be congratulated on the production of this text. It is recommended reading and as a reference work for the busy practitioner in that there is an abundance of information worked into a short text.

—Joe C. Rude, M.D., Austin.

Alcoholism; A Treatment Guide for General Practitioners

DONALD W. HEWITT, M.D. 112 pages. $3. Philadelphia, Lea & Febiger, 1957.

Alcoholism has become one of the leading public health problems confronting America today. It is a cause of growing concern among members of the medical profession, ministers, educators, and civic leaders. Dr. Hewitt bases his book on the results obtained in his work at the Charity Alcoholic

Rehabilitation Center, Los Angeles. This center is the largest of its kind in the western United States and treats an average of 100 alcoholics a month. He particularly stresses the need on the part of the physician of the confidence and cooperation of the patient's family and friends and attempts to show them and all others who come in contact with the patient how they can put themselves in a better position to aid him.

This is believed to be the first book of its kind intended primarily for the general practitioner to help him meet the widespread need for specific management, treatment, and follow-up therapy of alcoholism as it is encountered on all social levels.

Etiologic Factors in Renal Lithiasis

ARTHUR J. BUTT, M.D., F.A.C.S., compiled and edited. 401 pages. $12.50. Springfield, Ill., Charles C Thomas, Publisher, 1956.

Dr. Butt has divided the book into 18 chapters, each being written by a man who has done extensive research in the particular phase of the subject assigned to him. A historical survey of factors relating to renal lithiasis will be of general interest to every urologist.

There is an exposition on calcium and phosphorus metabolism, and the various stone types, calcium oxalate, urate cystine, and sulfonamide concretions, are discussed individually.

The chapter by F. E. B. Foley is well written and clearly sets forth the hydrodynamics of the urinary tract, which he understands so well. The principles stated in this monograph are worthy of review by every practicing urologist.

The role of infection in calculus formation is reviewed and Randall's plaques are discussed.

A summary of more recent research into changes occurring in the ground substance of the kidney and its relationship to stone formation is presented. Finally the role of colloids in the urine is described and observations as to the effect of hyaluronidase on this colloidal balance are presented.

No new or startling information is presented in this volume. However, it does summarize and document much of the material which has appeared in the literature over the past 10 years. The bibliography of each chapter provides a ready source of reference for those interested in reviewing further any particular phase of this broad subject.

—Roy R. Roberts, M.D., Plainview.

Medical Services for Rural Areas; The Tennessee Medical Foundation

WILLMAN A. MASSIE, Chairman, Health Committee, Council of the Southern Mountains; Formerly Field Secretary, The Tennessee Medical Foundation. 68 pages. Cambridge, Mass., published for the Commonwealth Fund by Harvard University Press, 1957.

Therapeutic Exercise for Body Alignment and Function

MARIAN WILLIAMS, Ph.D., Assistant Professor of Physical Therapy, Department of Allied Medical Sciences, School of Medicine, Stanford University, and CATHERINE WORTHINGHAM, Ph.D., Director of Professional Education, National Foundation for Infantile Paralysis. Exercise Illustrations by Harold Black. 127 pages. $3.50. Philadelphia, W. B. Saunders Company, 1957.

This manual is designed for the use of persons dealing with problems of body alignment and function. It should be of particular value to physical therapists and also to students and physicians interested in the teaching and practice of physical medicine. As the authors point out, the text is concerned with the selection and analysis of material related to body alignment rather than the introduction of new techniques. General principles of exercise and stretching are stressed in the manual while the number of specific exercises has been kept to a minimum.

The coverage of standing posture, analysis of body alignment, procedures used in posture evaluation, tests for muscle shortening, and positions of the body in activity and rest is simply presented and well illustrated. All of this information serves as an excellent guide in establishing and understanding the basic objectives for each patient so that the therapeutic exercise program may be suited to his individual needs. The exercises for the various parts of the body—that is, the low back, upper trunk and neck, and lower extremities —are fully described and illustrated.

A brief review of anatomical location and role of the primary muscles concerned in body alignment and function are illustrated in the appendix.

The authors have collected their information from a whole wealth of literature related to the subject and have presented a compact informative manual which has long been needed in the field of physical medicine.

—Millicent M. Han, Physical Therapist, Austin.

Surgery for General Practice

VICTOR RICHARDS, M.D., Professor of Surgery, Chairman of Department of Surgery, Stanford University School of Medicine, San Francisco. 947 pages. St. Louis. C. V. Mosby Company, 1956.

This well written and comprehensive book is the product of the author's and seven outstanding contributors' years of experiences and painstaking studies on the ward, in the operating room, and in pathological and experimental laboratories.

The text contains 43 chapters, the first of which describes anesthesia of choice and its reverses. The second chapter is perhaps the most dramatic and outstanding contribution, describing hemorrhage, shock, and the immediate treatment with blood and its substitutes before reconstruction and restoration of the body and tissues can be accomplished. The author felt this chapter was of first importance and included it in the beginning of the text to prepare the physician for the chapters that follow. Reference is made to this chapter frequently.

The remaining chapters are concerned with surgery. Each includes the various systems, organs, diagnosis, pathology, and choice of treatment. The description of the procedures and pathology of each phase is simple and excellent, profiled by 476 illustrations.

The text demonstrates the diligence which has been exercised in presenting such a valuable store of information. It is written for simplicity and filled with a wealth of knowledge.

—A. W. Brazda, M.D., Ranger.

Classics in Arterial Hypertension

ARTHUR RUSKIN, M.D., F.A.C.P., Associate Professor of Internal Medicine, University of Texas Medical Branch, Galveston. 358 pages. $9.50. Springfield, Ill., Charles C Thomas, Publisher, 1956.

This is not an ordinary history but a compilation of original papers which are truly classics in the field of arterial hypertension.

The introduction includes a direct translation from the Chinese literature of 2600 B. C. dealing with pulse lore of that time and a summary of interesting excerpts from antiquity.

The book is divided into two parts—"Methods" and "Significance." "Methods" is composed of eight papers presented over a period of 170 years dealing with the development of techniques in the recording of blood pressure beginning with the cumbersome, direct method of Stephan Hale in 1733 and leading eventually to the easy recording of blood pressure with the inflatable cuff and a mercury manometer described by Rive-Rocci in 1896. This section ends with the succinct presentation by Nikolai Korotkov of the auditory

method of determining blood pressure and a description of three phases for the determination of systolic and diastolic pressures.

With the development of an acceptable way to measure arterial pressure, its significance in disease was proven, and the second part of the book concerns its relationship to cardiovascular and renal disease. It includes 16 papers exemplifying the progress in knowledge over 300 years and ending with the memorable paper of Harry Goldblatt and his coworkers when they reported a workable method for the production of experimental renal hypertension.

This is an excellent book for those interested in medical history and the special field of cardiovascular disease. All translations, except in the introduction, are the author's, and, to paraphrase a statement in this modest preface, making them more generally available is a most useful addition to medical literature.

—George Clark, M.D., Austin.

Health Yearbook, 1956

Compiled by OLIVER E. BYRD, Ed.D., M.D., F.A.P.H.A., Professor of Health Education, Stanford University. 278 pages. $5. Stanford, Calif., Stanford University Press, 1957.

This book offers a resume of important publications in the fields of public health, medicine, and allied scientific areas. The author has shown great facility in his ability to summarize the material of one or more articles on a scientific subject and incorporate this material into a brief, concise statement understandable by nonprofessional people. The choice of material is good, a great variety of subjects being handled in the 254 articles comprising the work.

This book will serve as a ready source for writers, teachers, and lecturers who do not need detailed scientific information, and the bibliography will lead one to more detailed material if such is desired.

—Jay J. Johns, M.D., Taylor.

Surgery in World War II; Volume II, General Surgery

MEDICAL DEPARTMENT, UNITED STATES ARMY; editor in chief, Col. John Boyd Coates, Jr., MC; editor for general surgery, Michael E. DeBakey, M.D.; associate editors, W. Philip Giddings, M.D., Elizabeth M. McFetridge, M.A. 417 pages. Washington, D. C., Office of the Surgeon General, Department of the Army, 1955.

The historical unit of the Army Medical Service and its advisory editorial board have done a magnificent job of collecting masses of information and sifting and evaluating it. It is to be remembered that many of these people have given of their time and substance to produce these volumes and record the many lessons learned in the resuscitation of men severely wounded in battle. The methods of combating shock, the use of plasma, the indications for use of whole blood and the technique of administration are covered in the initial chapter as well as the use of albumin for elevating blood pressure with its freedom of such risks as hepatitis.

The importance of relief of pain is stressed as well as the control of hemorrhage and the methods by which this is done. The importance of conservation of body heat, position, emptying the stomach, and oxygen administration all come in for their proper share of consideration. An important section that bears careful reading is the one on morphine overdosage and poisoning, and the relief of pain by other methods comes in for its proper evaluation. It is interesting to read the section on the psychological preparation for operations and the importance of the chaplain and what he has to offer, particularly to a soldier in distress, for often it is only after his religious piece of mind is satisfied that serenity and self control get into command.

One should pause to pay tribute to the many lives saved by anesthesia and to the wonderful strides it made during the war years. The many different agents used properly and with the indications for each as they evolved during this period is one of the truly fine contributions of medicine.

Wounds of every organ in the abdomen are discussed, and the problems to be solved in connection with each are considered together with the effect of the time element in their care and management. The type of wounding agents also comes in for its share.

The classification of shock and its therapy as well as antibiotic therapy is discussed. A timely chapter on postoperative complications which include pulmonary as well as abdominal is included followed by a resume of the factors producing death. Included with the discussion of the abdomen are injuries of the blood vessels and retroperitoneal structures such as the kidneys. The final chapter on the management of colostomies is one that needs no emphasis for anyone who has had the experience of being on a receiving team of a hospital as patients arrived in considerable numbers.

—Joe C. Rude, M.D., Austin.

The Chemistry and Biology of Purines; Ciba Foundation Symposium

Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. 327 pages. 124 illustrations and structural formulae. $9. Boston, Little, Brown and Company, 1957.

Clinical Physiology; The Functional Pathology of Disease

ARTHUR GROLLMAN, M.D., Ph.D., F.A.C.P., Professor and Chairman of the Department of Experimental Medicine, University of Texas Southwestern Medical School, Dallas, editor. 854 pages. $12.50. New York, Blakiston Division, McGraw-Hill Book Company, 1957.

It is a never ending cycle trying to keep in reading acquaintance with the constantly advancing concepts of this subject, so basic in the fundamentals of the practice of medicine as it has been, is now, and will be in the future. This is a much needed contribution which fills the gap in the metabolic, cardiovascular, and endocrine fields in which the greatest advances have taken place over the past decade.

This text is understandable, and one can get a grasp of the informational material needed without going into long and protracted reading of the literature on the subject. The illustrations are timely and well balanced. One is appreciative of the many references at the end of each chapter, and this, together with the multiple authorship in which each contributor is at home in his own field of special endeavor, makes of this a fine text for medical students and a good reference for practicing physicians who desire to understand more fully the basic principles biochemically, pathologically, pharmacologically, and bacteriologically of the diseases they encounter.

This text does an excellent job of correlation and will meet a real need.

—Joe C. Rude, M.D., Austin.

Connective Tissue in Health and Disease

G. ASBOE-HANSEN, M.D., editor; Connective Tissue Research Laboratory, University Institute of Medical Anatomy, Copenhagen. 321 pages. $15. New York, Philosophical Library, 1957.

This book represents the collected efforts of many leading medical investigators who have been delegated a chapter touching upon some facet of connective tissue. In the words of the editor, "The contributions have been made in the hope to acquaint the medical world with the status and significance of connective-tissue science by means of surveys bringing each aspect up to date." It begins with the most elementary laboratory findings which most of us can barely recall and peruses the entire collagen field in health and disease as the

title implies. This book is obviously written for the investigator or student who either has or must find the time to wade through the tedious details. For quick reading one would have to be well grounded in biochemistry. Practitioners and busy clinicians would hardly consider this a handy manuel. In fairness to all concerned the topic involved is vast and any attempt to present detailed considerations is indeed a feat. Dr. Asboe-Hansen aptly expresses the situation when he asks the reader "to receive the publication with tolerance of its shortcomings and with sympathy for its aims."

A bright spot in this book is the chapter devoted to collagen diseases as related to dermatology. This section is concise, descriptive, and pertinent. It gives rapid thumbnail sketches of the various disorders, which surely will help many who have been hopelessly lost in the maze of ever changing classifications.

I would recommend this book for the scientifically inclined, biochemists, clinical researchers, hapless medical students and convalescing practitioners with an abundance of unoccupied time.

—Wade H. Lewis, M.D., San Antonio.

★ American Medical Association

AMA Conferences To Be Held

Two American Medical Association councils have planned meetings for the coming months. The eighth annual County Medical Societies Civil Defense Conference, sponsored by the AMA Council on National Defense, will be held November 9-10 at the Morrison Hotel in Chicago; the fourth annual Conference on Mental Health will be November 22-23 in Chicago; and the fifty-fourth annual Congress on Medical Education and Licensure is scheduled for February 9-11 at the Palmer House in Chicago.

For the Conference on Mental Health in Chicago November 22 and 23, discussion topics will be: (1) the role of the general practitioner in relation to a specific psychiatric case, (2) Blue Cross-Blue Shield and other voluntary health insurance plans for the psychiatric patient, (3) relationship of the psychiatrist in private practice to the general hospital in his community, and (4) psychiatric and related mental health problems in industry.

Mental health representatives from county medical societies will be welcome. The guest speaker at a dinner meeting on the first evening will be Dr. Manfred Guttmacher, Baltimore, who will speak on "The Role of Psychiatry in Relation to the Problem of Capital Punishment."

The Congress on Medical Education and Licensure will be sponsored by the Council on Medical Education and Hospitals, the Federation of State Medical Boards of the United States, and the Advisory Board for Medical Specialties. The major topic of concern at the congress will be medical education in the rapidly changing scene. The conferees will view medical education's broad potential from four facets—the changing characteristics of the nation's population, sociological trends, economy and medical knowledge, and the implications of these factors on medical education, medical research, and medical care.

To help local medical and health personnel plan their roles in disaster and civil defense emergencies is the purpose of the Civil Defense Conference. At the meeting a report will be given by Congresswoman Martha W. Griffiths of Michigan on the status of national civil defense legislation. Other reports include one on the experience gained through several test operational exercises conducted under simulated disaster conditions, including a critique of the national exercise "Operation Alert."

AMA SETS UP RESEARCH FOUNDATION

The American Medical Research Foundation was established recently by the American Medical Association. The following are the principal purposes of the foundation: (1) to promote the betterment of public health through scientific and medical research; (2) to plan and initiate scientific and medical research, and (3) to collect, correlate, evaluate, and disseminate results of scientific and medical research activities to the general public.

Meetings will be held annually at the time of the AMA annual sessions, and voting members of the foundation will be AMA Trustees.

★ Texas Medical Association

ANNUAL SESSION PROGRESS

Twenty-five noted out-of-state guest speakers will spark the programs of nine scientific sections and about a score of specialty societies at the 1958 annual session of the Texas Medical Association in Houston, April 19-22. Although the list of guests had not been completed by press time, the following have definitely accepted invitations to attend:

Dr. C. Knight Aldrich, Chicago—neuropsychiatrist.

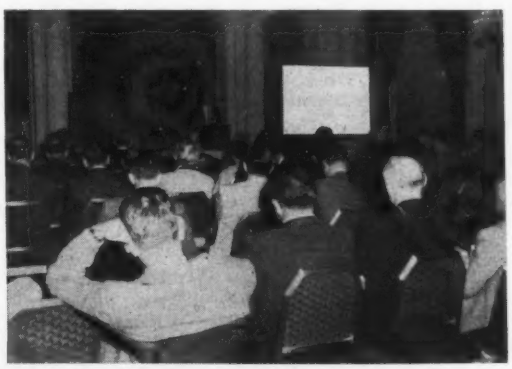
Dr. David B. Allman, Atlantic City—President, American Medical Association.

Dr. Raynold N. Berke, Hackensack—ophthalmologist.

Dr. Robert N. Creadick, Durham, N. C.—obstetrician and gynecologist.

Dr. Victor Goodhill, Los Angeles—otolaryngologist.

Dr. Burgess L. Gordon, Albuquerque—chest physician.



Guest speakers tell of latest medical advances.

Dr. George C. Griffith, Los Angeles—cardiovascular diseases.
Dr. Elmer Hess, Erie, Pa.—urologist.
Dr. John Tilden Howard, Baltimore—gastroenterologist and proctologist.
Dr. Amos R. Koontz, Baltimore—traumatic surgeon.
Dr. Barbara Korsch, New York—pediatric psychiatrist.
Dr. George M. Lewis, New York—dermatologist.
Dr. Edward G. McGavran, Chapel Hill, N. C.—public health physician.
Dr. Joe V. Meigs, Boston—cancer specialist.
Dr. Russell H. Morgan, Baltimore—radiologist.
Dr. I. S. Ravdin, Philadelphia—cancer specialist.
Dr. Robert J. Reeves, Durham, N. C.—radiologist.
Dr. James D. Rives, New Orleans—surgeon.
Dr. Howard F. Root, Boston—diabetes specialist.
Dr. Julian M. Ruffin, Durham, N. C.—internist.
Dr. Robert M. Smith, Boston—anesthesiologist.
Dr. Joseph Stokes, Jr., Philadelphia—pediatrician.
Col. Frank M. Townsend, Washington, D. C.—pathologist.
Dr. Allen F. Voshell, Baltimore—orthopedist.

The 1958 program will extend over a four day period, rather than five as in the past, with the President's Party on Tuesday (April 22) evening being the final event of the session. The change in format for the coming meeting were recommended by the Council on Scientific Work and approved by the Executive Council at its meeting last month. The revised format includes a general meeting luncheon on Tuesday as well as on Monday and the final meeting of the House of Delegates on Tuesday afternoon rather than on Wednesday morning. Refresher courses will be given on Monday and Tuesday mornings, scientific section programs on Monday and Tuesday afternoons, and most specialty society meetings on Sunday and Monday.

ANNUAL SESSION REMINDERS

Doctors who wish to present papers before the scientific sections of the Association should submit these papers, or their topics, to the appropriate section officers immediately. Section programs are being arranged currently, but some already have been completed. The section officers follow:

OFFICERS OF SCIENTIFIC SECTIONS

SECTION ON GENERAL PRACTICE
J. H. Steger, Fort Worth, Chairman.
James H. Sammons, Highlands, Secretary.

SECTION ON INTERNAL MEDICINE
Dolph L. Curb, Houston, Chairman.
Hugh Arnold, Houston, Secretary.

SECTION ON SURGERY
W. H. Pickett, Dallas, Chairman.
T. G. Blocker, Galveston, Secretary.

SECTION ON OBSTETRICS AND GYNECOLOGY
Frank J. Lee, Wichita Falls, Chairman.
W. H. Jondahl, Harlingen, Secretary.

SECTION ON EYE, EAR, NOSE, AND THROAT
Alfred A. Nisbet, San Antonio, Chairman.
Jack L. Turner, Odessa, Secretary.

SECTION ON RADIOLOGY
Robert N. Cooley, Galveston, Chairman.
Francis E. O'Neill, San Antonio, Secretary.

SECTION ON PUBLIC HEALTH
J. E. Peavy, Austin, Chairman.
Fred K. Laurentz, Houston, Secretary.

SECTION ON PATHOLOGY
Lloyd Hershberger, San Angelo, Chairman.
J. E. Williams, Abilene, Secretary.

SECTION ON PEDIATRICS
Edward L. Pratt, Dallas, Chairman.
A. O. Manske, Waco, Secretary.

Scientific and technical exhibits provide extra interest.

The Committee on Scientific Exhibits is considering applications for scientific exhibit space in Houston. Doctors who wish to enter exhibits should write Dan Lehman, Coordinator of Exhibits, Texas Medical Association, 1801 North Lamar, Austin, for applications. The committee considers applications from time to time, thus giving early notice of acceptance or rejection. The general objectives to be achieved by the exhibits are to emphasize new concepts and recent advances, to reemphasize older and possibly forgotten knowledge that still is useful and applicable, and to show what Texas doctors are doing.

TMA Offers Programs for County Societies

Pamphlets describing the programs available through the Texas Medical Association's central office were mailed in mid-August to all county medical societies. Nine programs on cardiac diseases, three on medical economics subjects, and one each on socioeconomic and legislative trends, Medicare, insurance, and public relations can be scheduled. So far, response has been good.

More copies of these pamphlets will be sent shortly; also, a program on legal aspects of medicine is being planned and will be available for county society meetings in the near future.

DATES FOR TMA CONFERENCES ANNOUNCED

Preliminary plans for several Texas Medical Association events scheduled for January in Austin have been announced by the President, Dr. Denton Kerr of Houston.

In conjunction with the Executive Council meeting Sunday, January 19, a conference for county medical society officials, a symposium on legislation, an orientation program for new and transfer members, and a series of committee meetings will be held Saturday, January 18. Among the speakers who will participate in the week end sessions is Kenneth McFarland, Ph.D., Topeka, Kan., an educator and nationally known speaker sponsored by General Motors.

The second Conference on Physicians and Schools sponsored by the Association's Committee on School-Physician Relationships has been set for Tuesday and Wednesday,

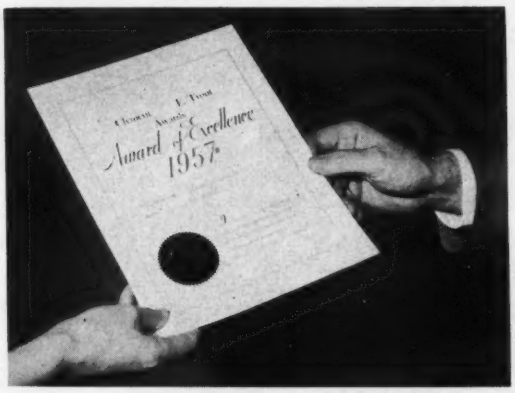
January 7 and 8. Physicians, school administrators, public health personnel, school board members (particularly physician members), and Parent-Teacher Association representatives are being invited to discuss problems of mutual concern relating to the health of school children.

Journal Twice Winner

Two awards for the *Texas State Journal of Medicine* were announced at the Midcontinent Conference of the International Council of Industrial Editors in Oklahoma City, September 11-13. A first place "award of excellence" in the trade and association division of the competition was received by the *Journal* for the best single article or editorial (Clement E. Trout award). Chosen to represent the *Journal* in this classification was the article entitled "Surgery: A Cultural Factor in Early Texas" by Dr. P. I. Nixon of San Antonio, which appeared in the March issue. A second place "award of merit" was won for general excellence.

The *Journal* holds membership in ICIE through the Society of Austin Industrial Editors, a professional organization composed of staffs of business, industrial, and association publications and the printers, engravers, artists, and photographers with whom they work. Although the *Journal* has not been entered in the annual competition each year, an award for general improvement was won in a similar event in 1949.

Present at the Oklahoma City conference to receive the award certificates was Miss Harriet Cunningham, managing editor of the *Journal*. Working with her as editorial assistants during the year for which the awards were received have been Mrs. Neil R. Gurwitz and Mrs. John A. Murphey, Jr. The *Journal*, like other projects carried on for the membership of the Texas Medical Association by its central office staff, is under the general supervision of the Executive Secretary, C. Lincoln Williston.



One of the certificates won by the *Texas State Journal of Medicine* changes hands.

Membership Directories Available

Directories listing members of the Texas Medical Association, their mailing addresses, telephone numbers, and specialties, produced through courtesy of Blue Cross-Blue Shield of Texas, have been distributed to Association members. Additional copies may be obtained through the Business Office, Texas Medical Association, 1801 North Lamar Blvd., Austin, at $10 each; checks should be made payable to Blue Cross-Blue Shield.

The Blue Cross membership directory is based on information provided by the Association in November, 1956. More recent listings of members and mailing addresses arranged by county medical society within districts appear in the membership list published in the July issue of the *Texas State Journal of Medicine*. Reprints of this *Journal* membership list are available from the Association's Business Office at 60 cents each, payable to the Association.

Demand for Journals Still Exists

The *Texas State Journal of Medicine* staff is still willing to pay postage on copies of the January and February, 1956, and May, 1957, issues of the *Journal* which are returned to it at 1801 North Lamar Blvd., Austin, to supplement depleted reserve supplies.

COMMITTEE CHANGES

A number of additions and changes in committee lists for the Texas Medical Association have been announced by the President, Dr. Denton Kerr, Houston, since the list was published in the July *Journal*. These include the following (figures in parentheses are years in which terms expire):

Committee on Medical History—Dr. T. C. Terrell, Fort Worth, resigned August 16 and was replaced by Dr. J. M. Coleman, Austin (1960).

Committee on Public Relations (appointments by Board of Trustees)—Dr. James A. Hallmark, Fort Worth (1959), and Dr. Foy H. Moody, Corpus Christi (1958).

Committee on Tuberculosis—Dr. W. D. Anderson, San Angelo, resigned as chairman and from the committee July 29. Dr. Elliott Mendenhall, Dallas, already a member of the committee, was named chairman August 15; Dr. John H. Selby, Lubbock (1961), was named to the vacancy on the committee. Dr. O. Edward Egbert, El Paso (1960) was appointed to a vacancy already existing on the committee.

Committee on Mental Health.—Dr. David M. Keedy, San Antonio, resigned October 5, creating a vacancy (1960) not yet filled.

Committee on Blood Banks—Dr. W. J. Emerson, Laredo, died July 5, creating a vacancy (1958) not yet filled.

Following are additions to appointments previously made:

Committee for Liaison with State Bar of Texas—Dr. William Klingensmith, Amarillo.

Committee on Military and Veterans Affairs—Dr. Walter Walthall, San Antonio.

Committee on Nuclear and Atomic Medicine—Dr. J. E. Miller, Dallas.

Advisers to Texas Chapter of the Student American Medical Association—Dr. George V. Launey, Dallas, Southwestern; Dr. E. Sinks McLarty, Galveston, University of Texas Medical Branch.

Committee on Bracero Insurance and Medical Care—Dr. C. E. Oswalt, Fort Stockton, chairman; Dr. S. W. Bohmfalk, Weslaco; Dr. J. G. Rodarte, Temple; Dr. J. W. Matthews, Edinburg; Dr. G. A. Hoffman, Fort Stockton; Dr. J. L. Moet, LaFeria.

Appointees to Board for Ophthalmic Technicians—Dr. Milton J. Loring, Midland (1961); Dr. Mary Agnes Lancaster, Dallas (1960); Dr. Vernon A. Black, Wharton (1959); Dr. Richard E. Leigh, Jr., Houston (1958).

Committee to Study Asian Influenza—Dr. Frederick C. Lowry, Austin, chairman; Dr. John F. McKinney, Jr., Temple; Dr. Robert E. Leslie, El Campo; Dr. J. M. Coleman, Austin; Dr. John H. Bohmfalk, San Antonio.

ASIAN FLU COMMITTEE NAMED

Acting in accordance with a resolution introduced by the Board of Councilors and adopted by the Executive Council on September 8, Dr. Denton Kerr of Houston, President of the Texas Medical Association, has appointed a committee to keep abreast of developments on Asian influenza and to provide guidance and direction in regard to policy and performance of medical care (See committee changes, page 807).

The resolution pointed out that much publicity has been given to a possible influenza epidemic in recent months and that there has been agitation for mass vaccination against the disease. It went on to state that a continuation of this philosophy wihout direction from the Texas Medical Association is likely to result in confusion similar to that encountered in the poliomyelitis vaccination program.

The Executive Council went on record as advocating that influenza vaccine be administered in accordance with the established doctor-pharmacist relationship and reaffirmed the philosophy that no patient should be denied influenza vaccine or medical care because of economic distress.

★ County Societies

County Society Programs

Programs which have been presented before county medical societies recently include:

Big Bend Society—"Female Anatomy," motion picture; and "The Cardiac Patient in Stress," motion picture.

Hill County Society—"Subdural Hematoma," Dr. Harry W. Slade, Waco.

McLennan County Society—"The Medical Witness," motion picture, presented by Philip R. Overton, Austin, General Counsel for the Texas Medical Association; and "The Doctor Defendant," motion picture.

Medina-Uvalde-Maverick-Val Verde-Terrell-Edwards-Real-Kinney-Zavala Counties Society—"Cardiac Arrhythmias," Dr. George Herrmann, Galveston; and "Foreign Bodies of the Trachea and Esophagus," Dr. Sam Greer, San Antonio.

Potter County Society—"How to Coexist with Inflation," Mark Myers, director of Dental-Medical Economics of Dallas.

Tarrant County Society—"Pulmonary Disease Simulating Tuberculosis," Dr. John S. Chapman, Dallas; "Some of the Problems of Medical Education," Dr. A. J. Gill, Dallas; and "Some Current Problems Between Law and Medicine," Dr. Hubert W. Smith, Director of the Law Science Institute, University of Texas, Austin.

Tom Green-Eight County Society—"The Senior Citizen—His Problems and Care," Dr. Ernest W. Keil, Temple.

Notes from the Minutes

From the minutes of various county medical society meetings come the following briefs:

The local press in Amarillo requested that one of its members be allowed to sit in on monthly meetings of the *Potter County Medical Society* and make reports to the newspaper. The society voted not to have a reporter at its meetings, but to provide releases of general interest for publication.

In *Tarrant County*, a committee has been appointed to revise, bring up to date, codify, and index the society's by-laws to coincide with those of the Texas Medical Association.

Wives Seek Instruction

It was a hard-working, enthusiastic group of doctors' wives who came by train, plane, and car to Austin September 25 for the annual School of Instruction held by the Woman's Auxiliary to the Texas Medical Association.

They came for more than one reason, to learn how to run their local auxiliaries more efficiently, to push the importance of State Auxiliary projects, to carry back information to the members of their local organizations who did not attend the workshop, and to get acquainted with doctors' wives from all over the state.

The morning session, with Mrs. W. Frank Armstrong of Fort Worth presiding, was devoted to reports from state committee chairmen.

After lunch, served in the Association headquarters where the School of Instruction was held, the delegates broke up into small groups to discuss the particular problems of their local organizations and trade ideas.

Not until evening did the Auxiliary members put work aside to turn to the lighter, but also important, business of simply having a good time.

The evening's entertainment, held at the Deck Club of the Commodore Perry Hotel, included a sherry party given by Mrs. Horace S. Renshaw of Fort Worth, State President, and dinner served beside the Club's indoor pool. Guests were both entertained and enlightened by a clever program about Auxiliary activities by Mrs. G. Bedford Brown of Angleton.

Many of those who attended the School of Instruction stayed over for a meeting of the Executive Board the next morning, at which Mrs. Renshaw presided.

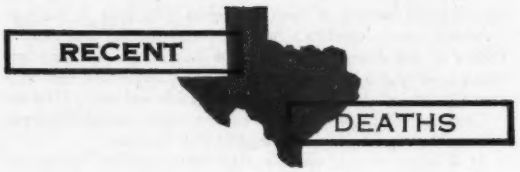
High light of the Thursday morning session was the talk by C. Lincoln Williston, Executive Secretary of the Texas Medical Association, in which he pointed out ways in which the Auxiliary can be most helpful to the Texas Medical Association.

"Legislation and public relations are our two most important joint objectives," Mr. Williston emphasized. He also went into detail about medical legislation expected to come up at the second session of the Fifty-Eighth Congress, giving Auxiliary members the information needed to make the organization more effective politically.

With a State President who is stressing Zest and Awareness as key words to sum up the qualities needed for effective group action, 1957-1958 should be a busy and productive year for auxiliaries throughout the state.

—MRS. FREDERICK C. LOWRY, Austin.

Officers of the Woman's Auxiliary to the Texas Medical Association for 1957-1958: President, Mrs. Horace S. Renshaw, Fort Worth; President-Elect, Mrs. John D. Gleckler, Denison; First Vice-President, Mrs. John H. Wootters, Houston; Second Vice-President, Mrs. J. C. Terrell, Stephenville; Third Vice-President, Mrs. Richard L. Hudson, Corpus Christi; Fourth Vice-President, Mrs. H. O. Padgett, Marshall; Fifth Vice-President, Mrs. O. N. Mayo, Brownwood; Treasurer, Mrs. William C. Barksdale, Borger; Recording Secretary, Mrs. Harold Lindley, Pecos; Corresponding Secretary, Mrs. J. Franklin Campbell, Fort Worth; Publicity Secretary, Mrs. F. C. Lowry, Austin; Parliamentarian, Mrs. Ramsay H. Moore, Dallas; Executive Secretary, Miss Hazel Casler, Austin.



DR. ALONZO A. ROSS

Dr. Alonzo Alverly Ross, emeritus member and former President of the Texas Medical Association, died September 24, 1957, at his home.

He was born January 22, 1868, in Caldwell County, and was the son of Abner Milton and Elizabeth (Shupe) Ross. He received his preliminary education in Prairie Lea and at the Jordan Institute in Lockhart, and was graduated from Tulane University School of Medicine, New Orleans, in 1896. He also did advance work at the University of Vienna, Austria, in 1902, and postgraduate work at New York Polyclinic School and Hospital, New York Hospital, and Tulane University School of Medicine.

Dr. Ross began practicing in 1893 in Hochheim where he stayed until 1901. In 1903, he went to Lockhart, where he formed a partnership with his boyhood friend, Dr. T. B. Coopwood, and was active there throughout his career. In 1914, Dr. Ross aided in the formation of an agreement among the resident doctors to build a hospital and form a group practice, the first such arrangement in that part of the country. During World War I, he served as chairman of the Selective Service Board of Caldwell County.

DR. ALONZO A. ROSS

Dr. Ross was a long time, consistent, and honored worker in the ranks of organized medicine, serving as sixty-seventh President of the Texas Medical Association. He also served in all of the offices of his county society, Caldwell County Medical Society; as president for 2 years of his district society; as a member for several years of the Committee on Legislation of the Texas Medical Association; as Vice-President of the Association; and for years as Councilor for his district.

He had been president of the Texas Railway and Traumatic Surgical Association; was a member of the Southern Medical Association, and the American Academy of General Practice; was on the Lockhart School Board for 36 years; and had been president of the Lockhart Business Men's Club.

An ardent worker in the Masonic Order, Dr. Ross was a thirty-third degree Mason, a Knight Templar, a member of the Shrine, in 1918 Grand Master of the Grand Lodge of Texas, a trustee and member of the board for many years of the Masonic Home and School at Fort Worth, member and past chairman of the Committee on Grand Officers Reports of the Grand Lodge of Texas, and a Sovereign Representative to Grand Lodge of England. He was a member of the First Baptist Church, Lockhart Chamber of Commerce, and Kiwanis Club.

Miss Ella E. Timm and Dr. Ross were married in Hochheim on November 11, 1896. Mrs. Ross died September 17, 1935. Survivors include two sons, Dr. Abner A. Ross of Lockhart and Dr. Raleigh R. Ross of Austin; two daughters, Mrs. Lewis M. Dabney, Jr., of New York and Mrs. Charles E. Dillon of Alexandria, Va., and a brother, Charles P. Ross of Lockhart.

Before entering medical school, Dr. Ross had lived in California, Oregon, and Washington, returning to Texas as a worker with a railroad. He recalled that he had driven the last spike in the Southern Pacific bridge over the Pecos River, then the highest bridge in the world. As an orphan boy, he had arranged and paid for an operation on his crossed eyes by Dr. Adolf Herf in San Antonio, done without benefit of anesthetic; this first operation was not successful and was repeated 2 years later, this time with an anesthetic, Dr. Herf having learned meanwhile of its usefulness. Later, after reading medicine with a Lockhart doctor and during his days at Tulane, Dr. Ross became close friends with a young anatomy instructor, now the well known Dr. Rudolph Matas.

DR. JESSE E. ROSS

Dr. Jesse Ellick Ross, Henderson, Texas, died of coronary thrombosis August 14, 1957.

Son of Dr. Jesse E. and Mary Elizabeth Ross, he was educated in the public schools of Henderson; he was born in that city on October 25, 1903. He took his premedical training at Baylor University, Waco, and was graduated from the

DR. JESSE E. ROSS

University of Arkansas School of Medicine, Little Rock, in 1935. He interned in the Methodist Hospital, Houston, and was a resident one year at Herrmann Hospital, Houston. Later, he did postgraduate work at the Cook County Hospital, Chicago. With the exception of four years as a commander in the Navy Medical Corps during World War II, Dr. Ross practiced in Henderson from 1937 until the time of his death.

Dr. Ross was a member of the Texas and American Medical Associations through the Rusk County Medical Society, of which he was president in 1949-1950. He also was a member of the Texas Academy of General Practice and the First Methodist Church.

As hobbies, Dr. Ross fished, hunted ducks, and raised Hereford cattle.

Miss Opal Wilhite, Dallas, and Dr. Ross were married September 2, 1929. Survivors other than Mrs. Ross are a son, James B. Ross, a premedical student in Baylor University, Waco; and a sister, Mrs. R. B. Carter, Houston.

DR. RICHARD E. BARR

Dr. Richard Everett Barr, Beaumont, Texas, died August 14, 1957, at his home of amyotrophic lateral sclerosis.

Born July 31, 1888, in Sprinkle, he was the son of W. B. and Tillie (Birdwell) Barr. He attended Texas Agricultural and Mechanical College, and the University of Texas, Austin, and was graduated from the University of Texas Medical Branch, Galveston, in 1920. He interned at John Sealy Hospital there, then became superintendent of the Frances Ann Lutcher Hospital, Orange, a position which he held until 1932 when he entered the private practice of radiology in Beaumont. He retired in 1954.

Dr. Barr was a member of the Jefferson County Medical Society at the time of his death, but had served as president of the Orange County Society from 1925 until 1931. In 1955, he was elected to inactive membership in the Texas Medical Association after having been a member since 1928 and having served in 1930 as chairman of the Section on Radiology and Physiotherapy. He also was a past president of the Texas Radiological Society and a member of the Radiological Society of North America, Phi Beta Pi medical fraternity, and American Medical Association, and was a fellow of the American College of Radiology. In his community, he was a member of the Drake Memorial Presbyterian Church of Orange, the Shrine, and Royal Arch Masons.

During World War I, he was enrolled in the Students Army Training Corps at the Medical Branch.

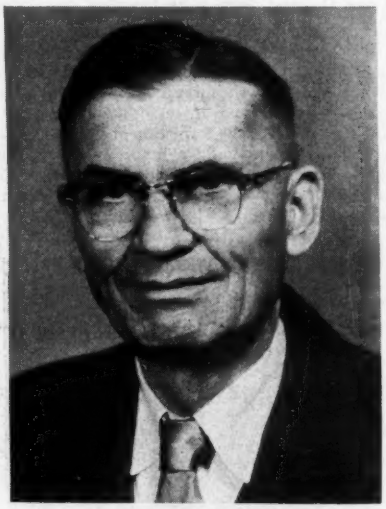
Miss Alma Savage and Dr. Barr were married September 22, 1916, in Temple. Mrs. Barr survives, as does a sister, Mrs. Frank Jamison, Austin.

DR. RICHARD E. BARR

DR. HUGH DAVIS

Dr. Hugh Davis, Seguin, Texas, died August 15, 1957.

He was born December 14, 1893, in Burkeville, and was the son of J. P. and Mary (Cohran) Davis. He attended schools in Gary, and studied at Lon Morris College in Jacksonville for three years before entering Southwestern University, Georgetown, from which he was graduated in 1920.



DR. HUGH DAVIS

Dr. Davis received his doctor of medicine degree from the University of Texas School of Medicine, Galveston, in 1924, and interned at Santa Rosa Infirmary, San Antonio. He began general practice in Texas City in 1925, and also practiced briefly in Bishop before moving in 1930 to Seguin, where he was active at the time of his death.

He was secretary of the Guadalupe County Medical Society in 1933 and 1949, and served as president in 1934. He also was a member of the Texas Medical Association, American Medical Association, Methodist Church, and Masonic Order. For recreation, Dr. Davis enjoyed playing the organ.

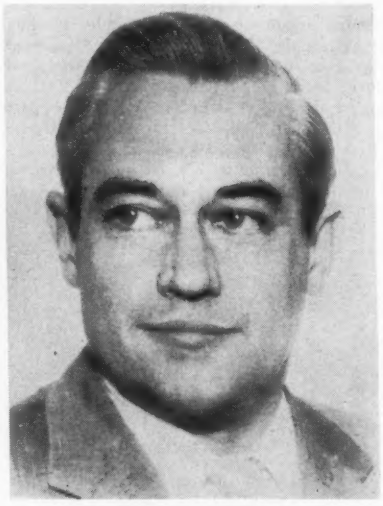
During World War I, he served as an enlisted man in the Army Medical Corps.

Miss Bertha Mosheim and Dr. Davis were married June 27, 1925, in Seguin; she survives, as do a son, Capt. John Thomas Davis, M. D., McCellian Air Force Base, Sacramento, Calif.; one brother, the Rev. S. S. Davis, Austin; and five sisters, Mrs. H. D. Williams, Magdalena, N. Mex.; Mrs. W. H. Williams, San Angelo; Mrs. Jack Dearing, Houston; Mrs. Ed Foley, Lindsay, Okla.; and Mrs. Nora Hairston, Chireno.

DR. W. J. EMERSON

Dr. William Joseph Emerson, Laredo, Texas, a member of the Texas Medical Association's Committee on Blood Banks and vice-president of the Webb-Zapata-Jim Hogg Counties Medical Society, died of cor pulmonale July 5, 1957.

He was born in Somerville, N. J., March 14, 1917, and was the son of Leo G. and Mary C. (DeMond) Epstein. Dr. Emerson attended preliminary schools in Bound Brook, N. J., and Springfield, Ill., and was graduated from the Catholic University of America, Washington, D. C., in 1940. He received his doctor of medicine degree in 1944 from the George Washington University School of Medicine, and interned in New York Hospital. The next two years he took a residency in pathology at Massachusetts General Hospital. In 1947, he received a Donner Foundation Fellowship in cancer research (pathology of breast cancer in hormone therapy), and he continued his work the following year with a grant from the United States Public



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Health Service. In 1950, he was awarded a Fulbright fellowship in cancer research at Le Laboratoire Pasteur de l'Institut du Radium in Paris, France. Dr. Emerson had been consultant to the Research Tumor Registry at the University of Texas M. D. Anderson Hospital and Tumor Registry, Houston, for the past few years. He had published several scientific papers on cancer of the breast. He began practicing his specialty in Laredo in 1953, and was in active practice at the time of his death.

Besides his activities in his state and county medical organizations, he was a member of the American Medical Association, George Washington University Medical Society, and Sigma Xi honorary science fraternity, and was chief of staff of Mercy Hospital. He also was a member of the Reform Party and the Committee on World Affairs. For recreation, Dr. Emerson enjoyed motorcycling, sailing, and photography.

He and Miss Helen Ruth Davidson were married June 18, 1949, in Kirkwood, Mo. She survives, as do three children, Dominique Margaret, Sharon Ruth, and Michael James, all of Laredo; a sister, Mrs. Walter Meigs, Storrs, Conn.; and his parents, Mr. and Mrs. L. G. Epstein, Watchung, N. J.

DR. N. W. ATKINSON

Dr. Newell Wrigley Atkinson, Alice, Texas, died of a coronary occlusion July 5, 1957, at his home.

He was born in Webberville on March 16, 1876; his parents were Newell and Ludy Atkinson. He attended public school in Austin, and received his doctor of medicine degree from the University of Texas School of Medicine, Galveston, in 1898. After practicing in Port Bolivar, near Galveston, 2 years, Bartlett for a few months, and at Copperas Cove for about 5 years, he moved in 1907 to Alice, and had been in practice there for 50 years. Dr. Atkinson was a member of the Texas and American Medical Associations through the Brooks-Duval-Jim Wells Counties Medical Society, of which he was president in 1935-1936. He also was a life member of the Masonic Order, and donated the land on which the local temple has been built. During World War I, he was a captain in the Army Medical Corps and served 18 months in France.

Dr. Atkinson was married in 1907 to Miss Helen C. Crenshaw; she died February 5, 1955. Survivors are a son, Newell Wrigley Atkinson, Jr., Alice; a sister, Mrs. Mabel DeWald, Corpus Christi; and two grandchildren, both of Alice.

DR. ABRAHAM ANTWEIL

Dr. Abraham Antweil, Fort Worth, Texas, died of reticuloendothelial cell sarcoma July 16, 1957.

Dr. Antweil was born in Vilna, Poland, on February 9, 1896, and was the son of Hanna (Tolk) and Joseph Antweil. After coming to the United States, he received his primary education in New York schools, and entered New York University College of Medicine. He was graduated in 1918, and spent a year in residency at the Gouveneur Hospital, New York. During World War I, he served as a first lieutenant in the Army Medical Corps, then moved to Fort Worth where he began his general practice. He was on the staff of the city-county hospital in Fort Worth, was a member of the Texas and American Medical Associations

DR. ABRAHAM ANTWEIL

through the Tarrant County Medical Society, and was a member of the Southern Medical Association.

He also was a member of the Downtown Kiwanis Club, was of the Jewish faith, and belonged to B'nai B'rith Lodge. He served on the board of trustees of the Jewish Federation for a number of years. Dr. Antweil was active in the field of real estate as well as medicine, and counted golf (before his illness) and his grandchildren as hobbies.

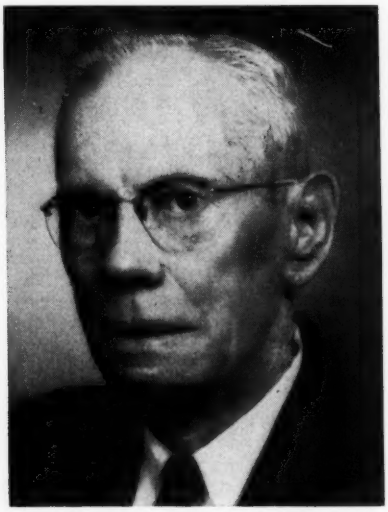
Miss Frieda Belle Maier and Dr. Antweil were married February 7, 1927, in Lockhart; Mrs. Antweil died January 17, 1956.

Survivors are a son, Joe David Antweil, Fort Worth; a daughter, Mrs. Shirley Rubinson, Fort Worth; two brothers, Morris Antweil, Fort Worth, and Benjamin Antweil, Gladewater; and four sisters, Mrs. Mamie Lichter and Mrs. Fannie Silberman, Dallas; Mrs. Bessie Golden, Corsicana; and Miss Ida Antweil, Fort Worth.

DR. M. L. FULLER

Dr. Martin Luther Fuller, Laredo, Texas, died July 19, 1957, after suffering a heart attack in May followed by a stroke in June. He entered the field of public health in 1938, and had retired at the end of April this year. Dr. and Mrs. Fuller were visiting in Abilene at the time Dr. Fuller became ill; they had decided to make Abilene their home.

He was born September 3, 1877, in Lamar County; his parents were Ben and Mary (Alexander) Fuller. He attended public schools in Deport and Trinity University in San Antonio, then entered the University of the South, Sewanee, Tenn., where he studied two years. He was graduated from Baylor University Department of Medicine, Dallas, in 1908; in 1942 he went to the University of Michigan, Ann Arbor, for postgraduate work in public health.



DR. M. L. FULLER

In 1908, Dr. Fuller began his general practice in Bradshaw; he moved in 1921 to Amarillo, where he was in private practice 17 years. He then became city health officer in Amarillo, and in 1944 was appointed director of the Mineral Wells—Palo Pinto County Health Unit. He headed a public health unit at Brownwood for a year and a half before moving to Laredo as director of the Laredo-Webb County Health Unit.

He was elected to honorary membership in the Texas Medical Association in 1957 after having been a member since 1909. He was a member of the Webb-Zapata-Jim Hogg Counties Medical Society, the American Medical Association, Texas Public Health Association, Texas Public Employees Association, Church of Christ, Masonic Lodge, Lions Club, and the American Legion. During the first World War, he was a first lieutenant in the Army Medical Corps.

Miss Gertie Horn and Dr. Fuller were married September 29, 1920, in Baird. Mrs. Fuller survives, as does a brother, Ben Fuller, Deport.

DR. W. R. WORTHEY

Dr. William Richard Worthey died July 3, 1957, in Call, Texas, after he had been ill with pneumonia.

Dr. Worthey was born September 23, 1874, in Rockland, and was the son of W. H. and Dewilda (Gregory) Worthey. He attended public schools and Memphis Hospital Medical College, Memphis, Tenn., before being graduated in 1912 from the Fort Worth School of Medicine. He began his practice in Smith's Ferry, then moved to Rockland for 10 months; he also practiced in Town Bluff and Jasper before settling in 1934 in Call. He practiced for 40 years at various Kirbey Lumber Company mills.

DR. W. R. WORTHEY

He was elected to honorary membership in the Texas Medical Association in 1955, after having been a member since 1904 through the Tyler or Jasper-Newton Counties Medical Society. He served the latter group as secretary from 1935 until 1939 and as president from 1940 until 1942. He also was a member of the American Medical Association, Tenth District Medical Society, Masonic Lodge, and Lions Club.

He was married on January 20, 1907, to Miss Bertha Shepherd. She survives, as do a daughter, Mrs. Grace Richards, Houston; a son, John T. Worthey, Call Junction; two brothers, Jack Worthey and Jim Worthey, Rockland; and two sisters, Mrs. Docia Simmons and Mrs. Vird Allen, Rockland.